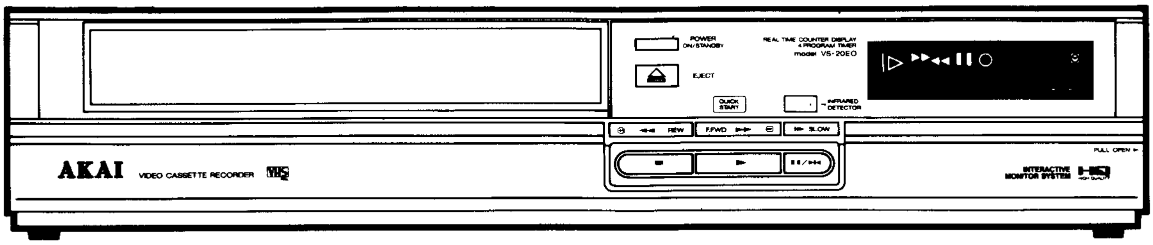
AKAI SERVICE MANUAL


POWER ON/STANDBY
REAL TIME COUNTER DISPLAY 4 PROGRAM TIMER model VS-20EO
EJECT
QUICK START
INFRARED DETECTOR
REW
FFWD
SLOW
PULL OPEN
AKAI VIDEO CASSETTE RECORDER VHS
INTERACTIVE MONITOR SYSTEM HQ HIGH QUALITY

HQ HIGH QUALITY VHS PAL

VIDEO CASSETTE RECORDER

MODEL VS-26 EA/ES/EV /EO/(E/V)

MODEL VS-20EO, 27EV

SPECIFICATIONS

Format EA/ES	VHS standard
EV/EO	VHS standard (PAL, MESECAM)
Video recording system	Rotary, slant azimuth two-head helical scan system
Rotary heads	Two video heads
RF input EA	System B, G VHF ch 0 – 5, 5A, 6 – 11, UHF ch 21 – 69
EV	System B, G (PAL, SECAM)
MIDDLE EAST	VHF ch 2 – 12, UHF ch 21 – 69
NEW ZEALAND	VHF ch 1 – 9, UHF ch 21 – 69
EO	System B, G (PAL, SECAM) VHF Low ch 2 – 4, S1 – S3 High ch M1 – M10, 5 – 12, U1 – U10 UHF ch 21 – 69
ES	System I VHF ch A – J (Ireland) ch 4 – 13 (South Africa) UHF ch 21 – 69
RF output EA	System B type modulation VHF ch 0,1 switchable (preset ch 1)
EO	System G type modulation UHF ch 30 – 39 adjustable (preset ch 36)
ES	System I type modulation UHF ch 30 – 39 adjustable (preset ch 36)
EV	System B type modulation
MIDDLE EAST	VHF ch 3, 4 switchable (preset ch 4)
NEW ZEALAND	VHF ch 2, 3 switchable (preset ch 3)
Recording (line input)	
EA/ES	PAL
EV/EO	PAL, SECAM (recorded as MESECAM)
Playback (line output)	
EA/ES	PAL
EV/EO	PAL, SECAM (MESECAM TAPE)

Video	
Line input level	0.5 – 2.0 Vp-p/75 ohms, unbalanced
Line output level	1.0 Vp-p/75 ohms, unbalanced
S/N ratio	More than 45 dB
Horizontal resolution	More than 250 lines
Audio	
Line input level	–8 dBm/50 K ohms, unbalanced
Line output level	–6 dBm/ 1 K ohms, unbalanced
S/N ratio	More than 40 dB
Frequency response	70 – 10,000 Hz
Recording/playback time	240 min. with E-240 cassette
Tape speed	23.39 mm/sec.
Quick finder	approx. 7 times normal speed
FF, REW time	approx. 5 min. with E-180 cassette
Timer	
Program	4 program/1 month and QUICK TIMER
Clock reference	Quartz crystal
Display	TV screen & FL (Tape counter, Timer etc.)
Power requirements	
EA	240 V AC, 50 Hz
EO	220 V AC, 50 Hz
ES	200 – 220 V AC, 50 Hz
26EV	230 V AC, 50 Hz
27EV	127/220 – 240 V AC, 60 Hz
Power consumption	
EA	23 W
ES	24 W (at 220 V)
EO	25 W
26EV	23 W
27EV	27 W
Operating temperature	5°C – 40°C
Dimensions	425 (W) x 84 (H) x 340 (D) mm
Weight	5.5 Kg

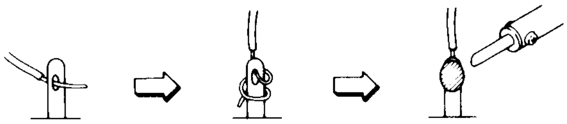
Standard accessories	
Connection cord	1
Remote control unit	1
Batteries for remote control	2
Operator's manual	1

* For improvement purposes, specifications and design are subject to change without notice.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (∗) symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal-input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15 μF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 Mohms.

★ INFORMATION

SYMBOLS OF MODEL NAME FOR PRIMARY DESTINATION

Symbol indicates the destination of the units as listed below.

Symbol	Classification	Principal Destination	System	
			Color	Broadcast
EA	S	Australia	PAL	B, G
ED	E	China	PAL	D
EDG	E	East Europe	PAL	D, K
EDI	E	China, Hong Kong	PAL	D, K, I
	Y1	China	PAL	D, K
EG	E	Spain, Northern Europe, Other	PAL	B, G
	Y7	Saudi Arabia		
EK	B	U.K.	PAL	I
	Y1	Hong Kong		
EM	E	Middle East	PAL	B, G
	Y7	Saudi Arabia		
EO	E	Holland, Switzerland, Northern Europe	PAL	B, G
	V	Italy		
EOH	E	Holland, Belgium	PAL	B, G
	V	Italy		
EOG	V	W. Germany	PAL	B, G
ES	E	South Africa, Ireland, Hong Kong	PAL	I
EV	E	South-East Asia	PAL	B, G
	U	Middle East, South-East Asia		
	Y1	New Zealand		
	Y7	Saudi Arabia		
EZ	S	New Zealand	PAL	B, G
EGN	E	Middle East	PAL, NTSC	B, G
	Y7	Saudi Arabia		
S	E	France	SECAM	L
SK	E	Latin America, Oceania, SECAM-OIRT	SECAM	K, K1
SEG	E	France, Switzerland	SEDAM, PAL	L, B, G
U	A	U.S.A.	NTSC	M
	C	Canada		
UM	U	Latin America	NTSC	M
J	J	Japan	NTSC	M

Quick start function

This VCR contains the quick start function.
This means that when a cassette tape is inserted into the VCR or the POWER is turned on with a cassette tape in the VCR, the tape will be loaded automatically, and at the same time QUICK START indicator will be turned on and the drum motor will be started to rotate.

* If the VCR is neglected in stop mode for several minutes, the quick start function will be automatically canceled. Accordingly, QUICK START indicator will be turned off and the drum motor will be stopped with the tape loaded. When the POWER is turned off with a cassette tape in the VCR, the tape will be unloaded and remain in the VCR.

Auto functions

This VCR contains the following auto functions.

1. If a cassette tape is inserted when the POWER is off, the POWER will be automatically turned on.
2. If a cassette tape without its recording safety tab is inserted, the VCR will automatically begin to playback the tape.
3. While a cassette tape without its recording safety tab is in the VCR, if the REC button is pressed, the cassette tape will be ejected automatically.
4. Even if the POWER is OFF, the cassette tape can be ejected by pressing the EJECT button.
5. Between the hours of 23:00 and 6:00, if the VCR is not in use, the front panel display is automatically dimmed to a lower light level.

EDIT switch

The EDIT switch is used only when you want to record from this VCR to another VCR. When recording on another VCR, you may not want to record the Monitor Displays as they appear on this VCR (for example, the PLAY ► indicator, STOP ■ indicator etc.), onto the new tape. In that case, set the EDIT switch to ON. Now when you press a tape transport button, the indicator appears only on the VCR's front panel display, not on the TV screen or the new tape.

Safety lock system (Remote control only)

This VCR's PLAY button can be locked to prevent access by small children.

To lock: With the VCR POWER ON press and hold the remote control's STOP button for about 8 seconds. An "L" will appear on the front panel display. Tape play will not function until the VCR is unlocked.
Even if the POWER is turned off, the VCR PLAY mode will remain locked until released. Other modes will remain operable.

To unlock: Press and hold the remote control's PLAY button for about 8 seconds.

INTRO SCAN system (Remote control only)

This VCR is capable of quickly fast forwarding to the beginning of each recorded segment on a tape, briefly playing back that segment, and then fast forwarding to the next segment.

This system also works in combination with the control signal which is recorded at the beginning of each recorded segment.

Press the INTRO SCAN button on the remote control. The VCR will immediately fast forward the tape to the beginning of the program and play about the first 8 seconds. Then, the VCR will again fast forward the tape to the beginning of the next recorded segment and again playback the first 8 seconds of the program.

This operation continues until the tape is finished or until you selected another mode (such as PLAY or STOP). While INTRO SCAN is searching, the F.FWD indicator lights and the PLAY indicator flashes. When INTRO SCAN is in playback, the F.FWD indicator flashes and the PLAY indicator lights. The S indicator lights all the time that INTRO SCAN is working.

Double speed playback (Remote control only)

This VCR can play back a tape at twice its normal speed. Press the x2 button on the remote control while the tape is in play. No sound will be head in this mode. Press PLAY to resume normal speed.

INDEX SEARCH system (Remote control only)

This VCR is equipped with the INDEX SEARCH system which allows you to directly locate the beginning of any recorded segment on a tape, within 9 segments (EV MODEL: 1 segment) of your starting point, in either forward or reverse direction, provided the recording was made on this VCR, or providing the recording is equipped with control signals. Each time a recording is made on this VCR, i.e each time the REC button is pressed, a control signal is automatically recorded along with the program. This means that even while a recording is being made, if you press the REC button again, a new control signal is added to the tape at that point. This feature is very convenient for marking any important point on a tape.

NOTE:
1. When you press the REC button to begin recording from the recording standby mode (PAUSE/STILL button), new control signals will not be added.
2. If the control signals are located within 3 minutes of the playback time from the present position, INDEX SEARCH may not be executed correctly.

Example 1: To search 4th program
1. Insert a recorded tape.
2. Let's say you are at the beginning of the tape and you want to view the 4th program on the tape. Press the right side of the INDEX SEARCH button 4 times. The VCR display shows the number of programs being searched, 4 in this case, along with the fast forward indicator and the S indicator. The TV display will also say Index 4. Both displays will count down as the VCR gets closer to the correct program, and then playback of segment 4 will begin automatically.

Example 2: To search 11th program then search 5th one from the beginning
1. Imagine that you have recorded 12 individual segments on a tape (Music videos for example). Let's say you want to view segment 11. Press the right side of the INDEX SEARCH button 9 times (the maximum). The VCR will fast forward to the beginning of segment 9 and begin playback.
2. Now press the right side of the INDEX SEARCH button 2 more times and the VCR fast forwards to segment 11 and begins playback.
3. Let's say segment 11 is finished and you want to go back and view segment 5. Since 11 is already finished, press the left side of the INDEX SEARCH button 7 times. The VCR will rewind all the way back to the beginning of segment 5 and begin playback.

I. CONTROLS

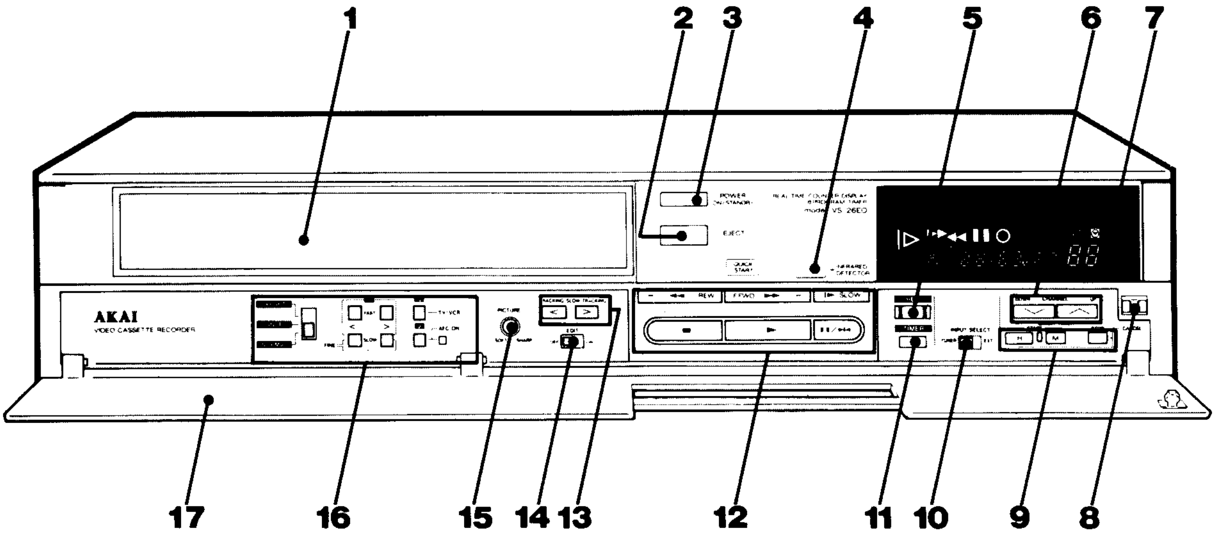

1
2
3
4
5
6
7
AKAI
VIDEO CASSETTE RECORDER
POWER
EJECT
REW
FFWD
SLOW
TIMER
EDIT
17
16
15
14
13
12
11
10
9
8

Fig. 1-1 Front view

1. **Cassette loading slot**
2. **EJECT button**
   To eject the video cassette tape.
3. **POWER button**
   To turn on or off the VCR.
4. **Remote sensor window**
   For reception of the remote control's signal.
   *Keep this window clean for remote control operation.
5. **REC (Recording) button**
6. **CHANNEL selector**
   To select a preset channel with the built-in tuner of the VCR.
7. **FL (Fluorescent) display**
   Tells you what the VCR is doing.
8. **Sub-panel door latch**
9. **QUICK TIMER buttons**
   To preset recording end time or quick programme recording.
10. **INPUT SELECTOR switch**
    To switch between internal tuner and external input.
11. **TIMER button**
    To stand by for automatic recording.
12. **Tape transport buttons**
    To run the tape for recording or playback.
13. **TRACKING/SLOW TRACKING control**
    To fine tune the playback picture.
14. **EDIT switch**
    For removing the on-screen characters during tape dubbing.
15. **SHARP/SOFT PICTURE control**
    To soften or sharpen the video picture.
16. **Tuning controls**
    Used when presetting stations.
17. **Sub-panel door.**

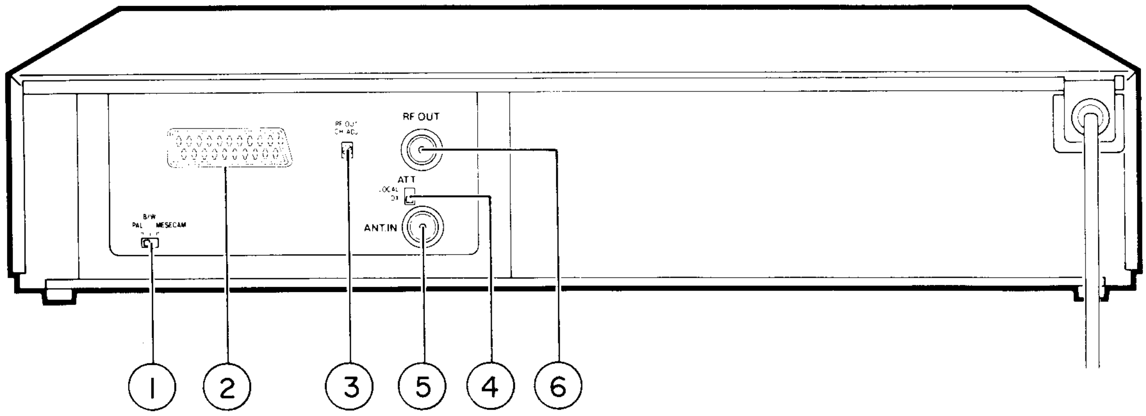

RF OUT
ATT
ANT IN
PAL
MESECAM
①
②
③
⑤
④
⑥

Fig. 1-2 Rear view (EO)

1. VIDEO MODE SELECTOR
2. 21 PIN JACK
3. RF OUT CH. ADJ.
4. ATTENUATOR SWITCH
5. ANT. IN JACK
6. RF OUT TERMINAL

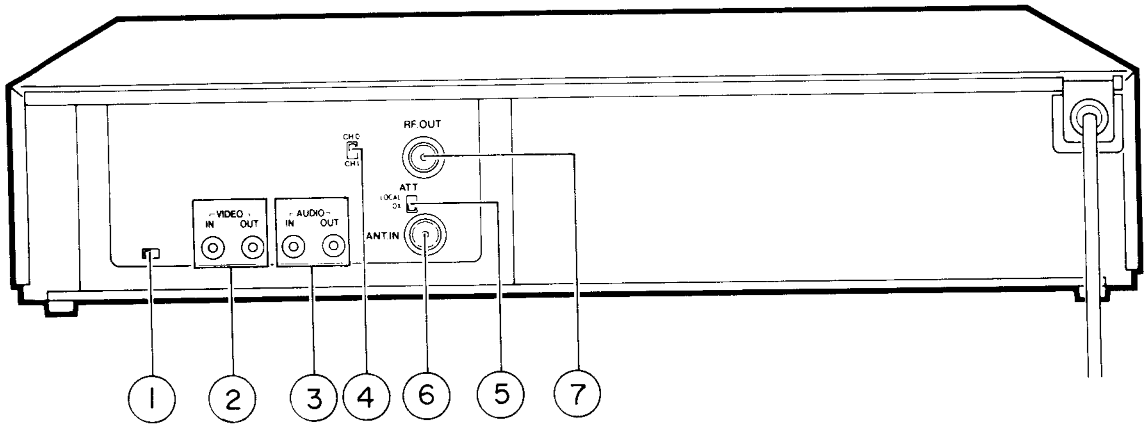
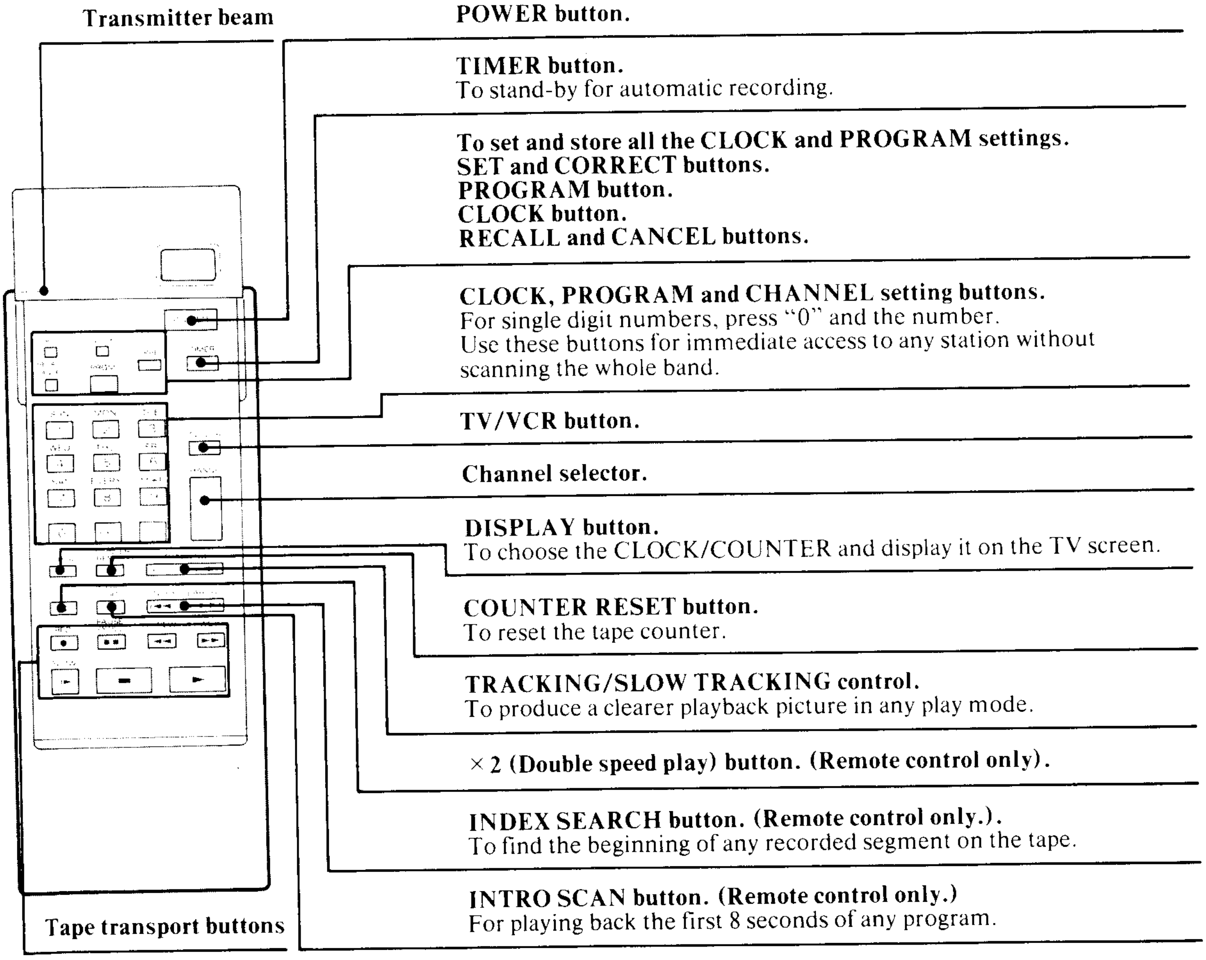


Fig. 1-3 Rear view (EA, EV, ES)

1. VIDEO MODE SELECTOR
2. VIDEO IN/OUT JACKS
3. AUDIO IN/OUT JACKS
4. RF OUT CH. ADJ
5. ATTENUATOR SWITCH
6. ANT. IN JACK
7. RF OUT TERMINAL



Transmitter beam

POWER button.

TIMER button.
To stand-by for automatic recording.

To set and store all the CLOCK and PROGRAM settings.
SET and CORRECT buttons.
PROGRAM button.
CLOCK button.
RECALL and CANCEL buttons.

CLOCK, PROGRAM and CHANNEL setting buttons.
For single digit numbers, press "0" and the number.
Use these buttons for immediate access to any station without scanning the whole band.

TV/VCR button.

Channel selector.

DISPLAY button.
To choose the CLOCK/COUNTER and display it on the TV screen.

COUNTER RESET button.
To reset the tape counter.

TRACKING/SLOW TRACKING control.
To produce a clearer playback picture in any play mode.

× 2 (Double speed play) button. (Remote control only).

INDEX SEARCH button. (Remote control only.).
To find the beginning of any recorded segment on the tape.

INTRO SCAN button. (Remote control only.)
For playing back the first 8 seconds of any program.

Tape transport buttons

Fig. 1-4 Remote Control Unit

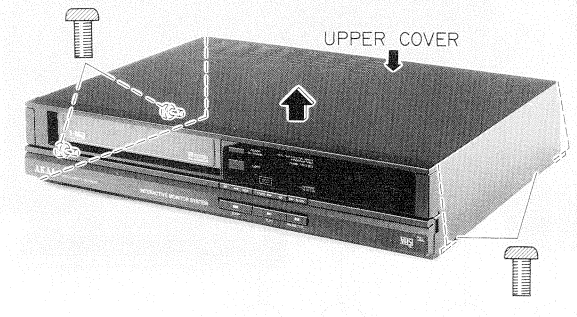
* The remote control contains operation buttons which are used the same way as the operation buttons on the front panel of the Akai VCR, and many which appear on the remote control only. The remote control can be used from a distance of up to 5 meters.

II. DISASSEMBLY

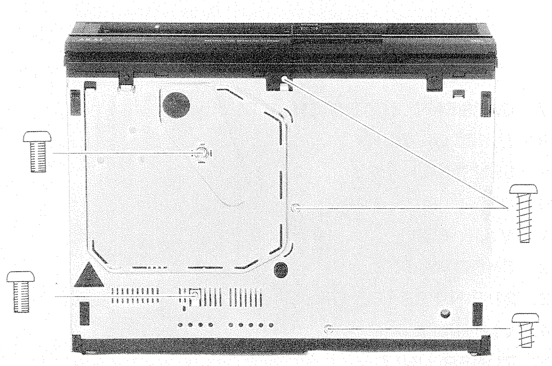
In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

* Photographs employed on this page are of mdoel VS-23EV

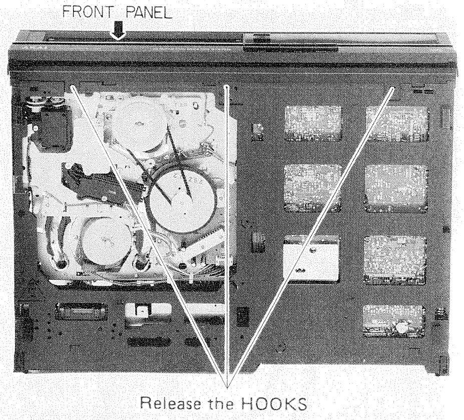
1 Removal of UPPER COVER


UPPER COVER

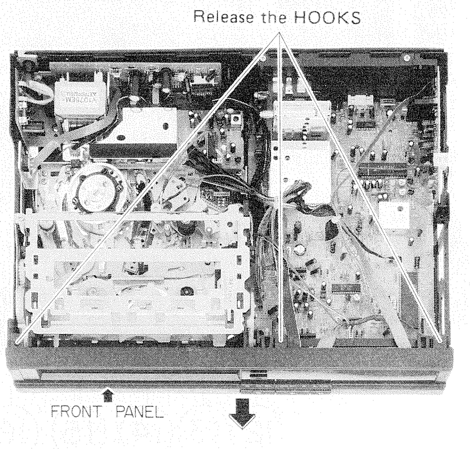
2 Removal of BOTTOM COVER



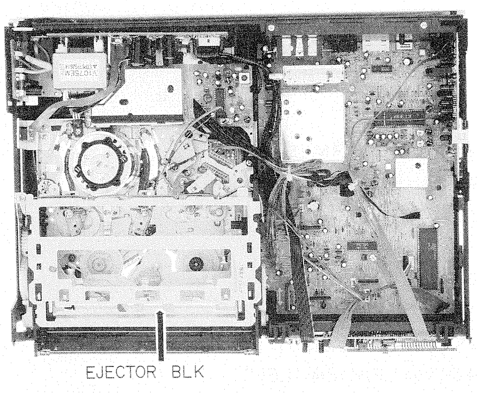
3 Removal of FRONT PANEL


FRONT PANEL
Release the HOOKS

4


Release the HOOKS
FRONT PANEL

5


EJECTOR BLK

✻ Please refer to "4-1-1 REMOVING THE EJECTOR BLK"

III. PRINCIPAL PARTS LOCATION

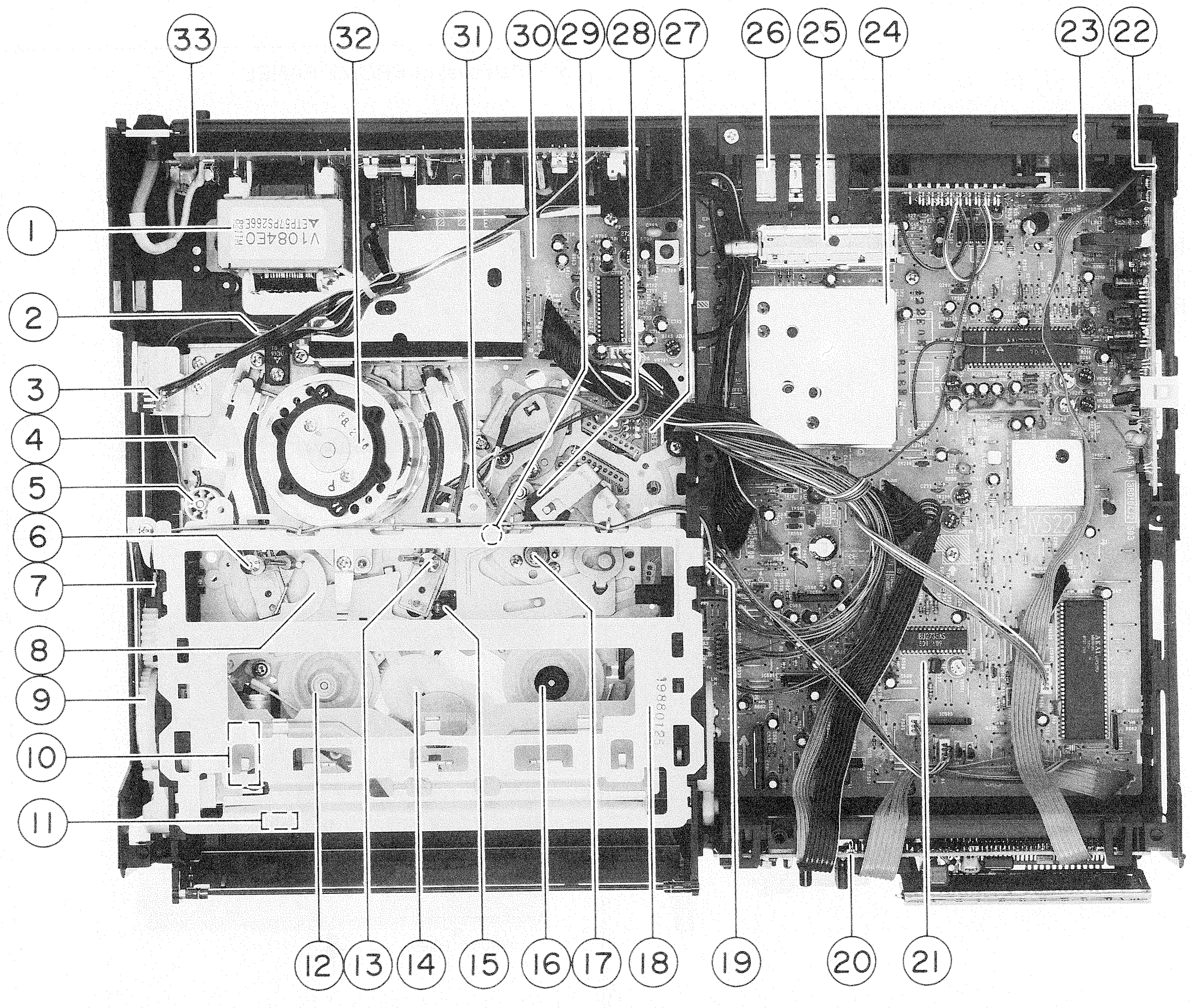


Fig. 3-1 Top view

1. POWER TRANSFORMER
2. TR (2) PCB (EXCEPT VS-27EV)
   TR PCB (VS-27EV ONLY)
3. TR (1) PCB (EXCEPT VS-27EV)
   DIODE PCB (VS-27EV ONLY)
4. FULL TRACK ERASE HEAD
5. SUPPLY GUIDE ROLLER
6. S. LOADING LEADER (LEFT)
7. SENSOR(S) PCB
8. TENSION ARM
9. LOADING MECH. BLK.
10. LOADING MOTOR
11. REC SAFETY SWITCH
12. SUPPLY REEL TABLE
13. T.U. LOADING LEADER (RIGHT)
14. CLUTCH BLK
15. SENSOR LED
16. TAKE-UP REEL TABLE
17. CAPSTAN MOTOR SHAFT
18. EJECTOR BLK
19. SENSOR(T) PCB
20. OPERATION PCB
21. MAIN PCB
22. CHROMA PCB
23. 21 PIN PCB (EO ONLY)
24. VIF UNIT
25. TUNER UNIT
26. RF CONVERTOR UNIT
27. CAPSTAN MOTOR PCB
28. PINCH ROLLER
29. TAKE-UP TAPE GUIDE
30. AUDIO & PRE AMP PCB
31. AUDIO/CONTROL HEAD
32. HEAD DRUM BLK.
33. POWER SUPPLY PCB

* Photograph employed on the page is of model VS-26EO.

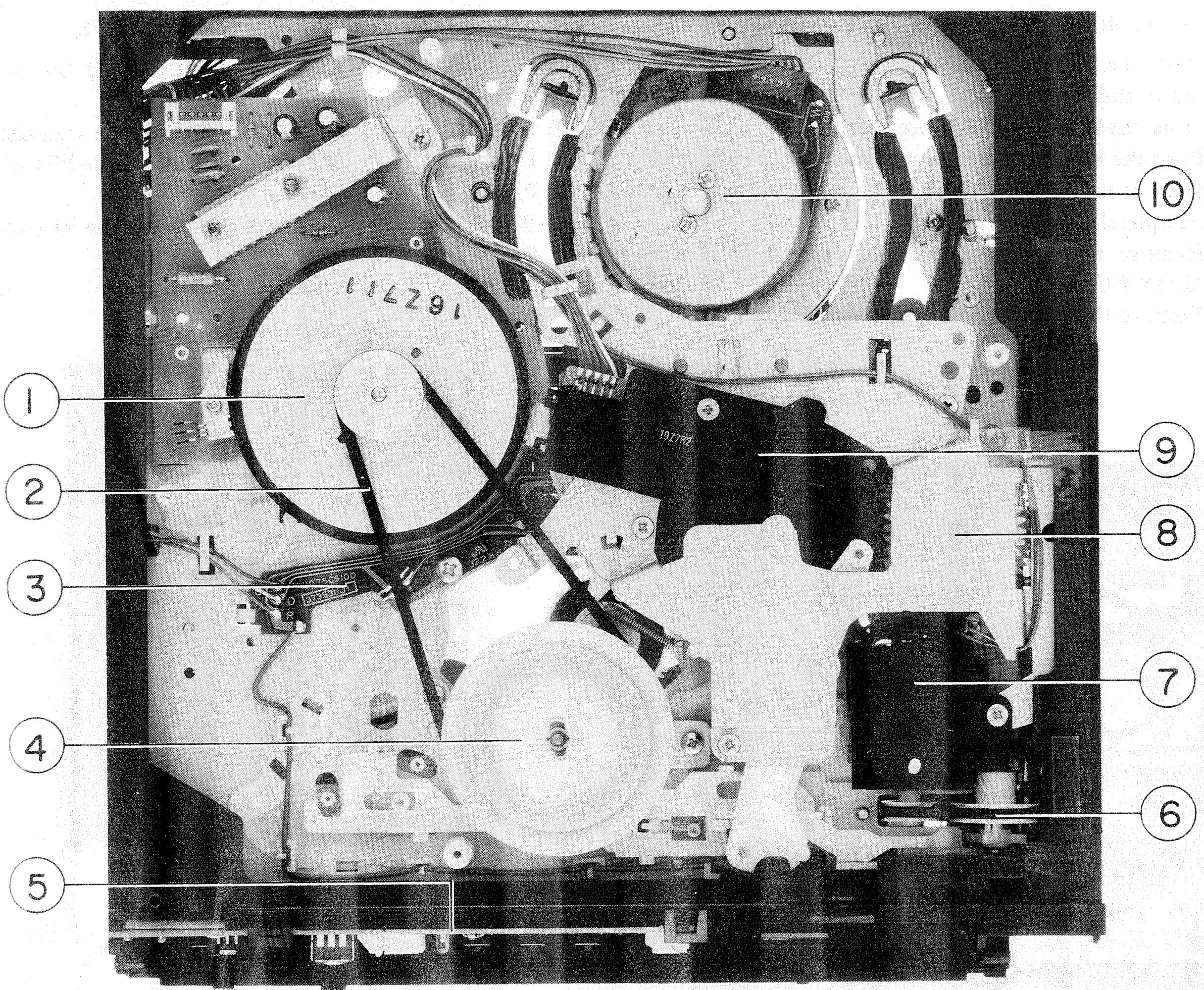


Fig. 3-2 Bottom view

1. CAPSTAN MOTOR BLK
2. IDLER BELT
3. SENSOR PCB
4. CLUTCH BLK
5. PRE SET PCB
6. LOADING BELT
7. LOADING DRIVE BLK
8. LOADING MECH. BLK
9. MODE SELECTOR
10. DRUM MOTOR BLK

IV. MAIN COMPONENTS REPLACEMENT

4-1. EJECTOR BLOCK

4-1-1. REMOVING THE EJECTOR BLOCK

1) Press the POWER button to turn ON the VCR and insert the cassette tape into the VCR. The unit will enter the PLAY mode automatically.
2) Press the POWER button again to turn OFF the VCR. Disconnect AC power cord after the tape is unloaded completely.
3) Remove two screws Ⓐ and disconnect P504 from MAIN P.C. Board.
4) Remove the EJECTOR BLOCK.

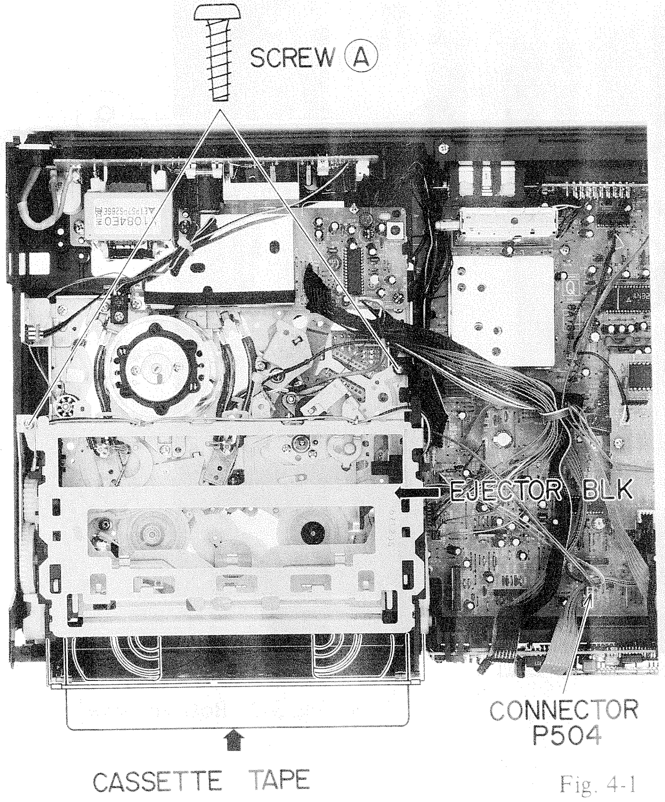


Fig. 4-1

4-1-2. INSTALLATION OF THE EJECTOR BLOCK

1) Install the EJECTOR BLOCK on the MECHA CHASSIS as shown in Fig. 4-2.
2) Tighten two screws Ⓐ and connect P504.
3) Plug in AC POWER CORD and press the POWER button to turn ON the VCR.
4) Confirm that unit will function correctly.

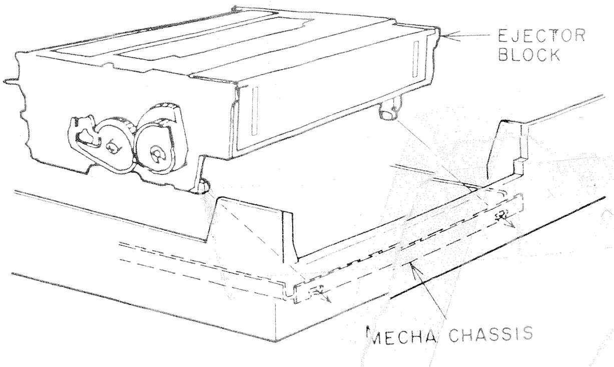


Fig. 4-2

4-2. LOADING MECHANISM BLOCK

4-2-1. REMOVAL OF MECHANISM BLOCK

1) Remove the EJECTOR BLOCK. (Refer to 4-1-1. REMOVING THE EJECTOR BLOCK.)
2) Remove two screws Ⓐ then remove the transistors.
3) Disconnect P700, P701 and P800 from the PRE-AMP P.C. Board.
4) Remove two screws Ⓑ then remove the PRE-AMP P.C. Board.

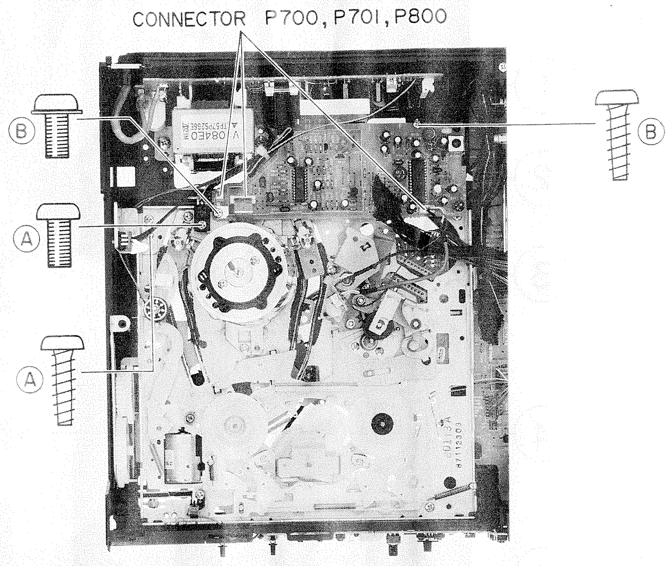


Fig. 4-3

5) Disconnect P102 from the DRUM MOTOR P.C. Board on the bottom of VCR.
6) Remove three screws Ⓒ then remove the MECHA. BLK.

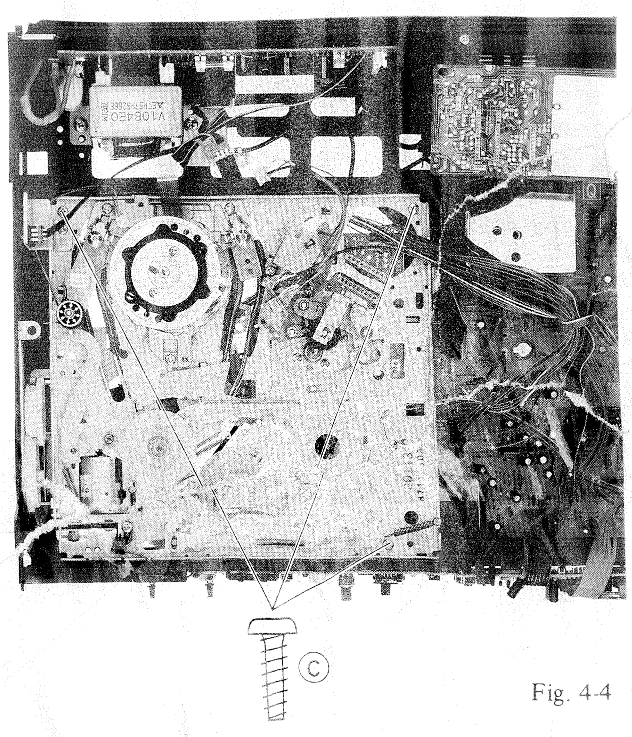


Fig. 4-4

4-2-2. REASSEMBLE OF THE LOADING MECHANISM BLOCK

1) Attach the GEAR FL DRIVE to CHASSIS CAM GEAR PART.

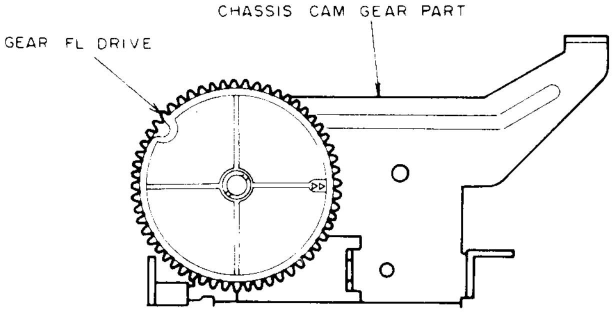

CHASSIS CAM GEAR PART
GEAR FL DRIVE

Fig. 4-5

2) Install the GEAR WARM PART as shown in Fig. 4-6.

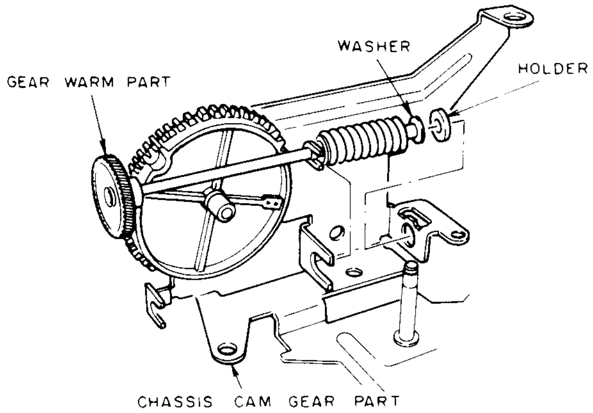

WASHER
HOLDER
GEAR WARM PART
CHASSIS CAM GEAR PART

Fig. 4-6

3) Attach the GEAR WHEEL to CHASSIS CAM GEAR PART so that the GEAR FL DRIVE mark ⓐ coincide with the GEAR WHEEL mark (b-1), and fasten the GEAR WHEEL with slit washer.

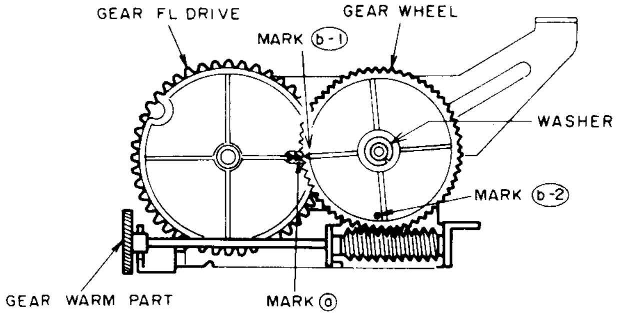

GEAR FL DRIVE
GEAR WHEEL
MARK (b-1)
WASHER
MARK (b-2)
GEAR WARM PART
MARK ⓐ

Fig. 4-7

4) Attach the LEVER CAM SLIDER as shown in Fig. 4-8.

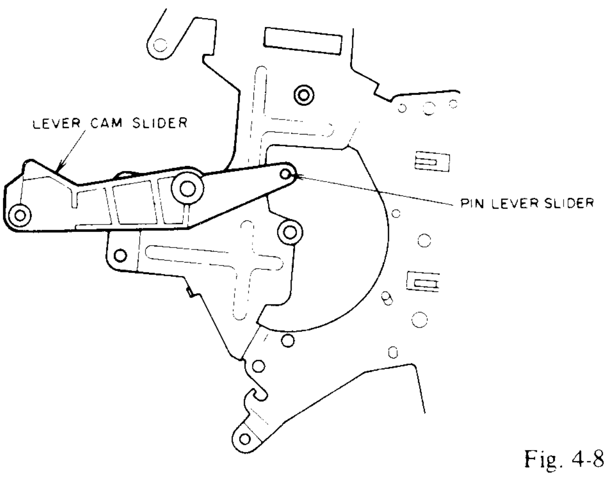

LEVER CAM SLIDER
PIN LEVER SLIDER

Fig. 4-8

5) Attach the GEAR CAM CENTER so that PIN LEVER SLIDER head appears through the HALL Ⓐ of the GEAR CAM CENTER.

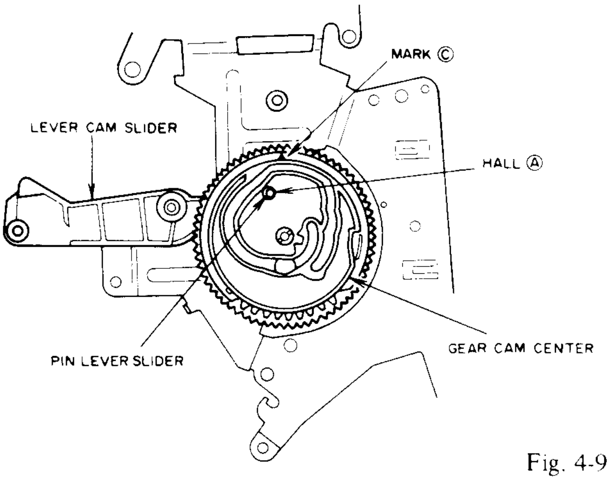

MARK Ⓒ
LEVER CAM SLIDER
HALL Ⓐ
PIN LEVER SLIDER
GEAR CAM CENTER

Fig. 4-9

6) Attach the GEAR CAM TENSION so that the GEAR CAM TENSION mark (d-1) coincide with the GEAR WHEEL mark (b-2), and moreover the GEAR CAM CENTER mark Ⓒ should be located between the marks (d-2) of the GEAR CAM TENSION.

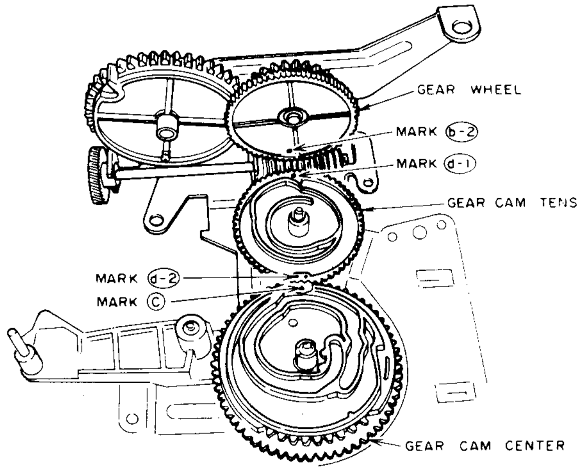

GEAR WHEEL
MARK (b-2)
MARK (d-1)
GEAR CAM TENSION
MARK (d-2)
MARK Ⓒ
GEAR CAM CENTER

Fig. 4-10

7) Attach the ARM FWD BRAKE and SPRING as shown in Fig. 4-11.

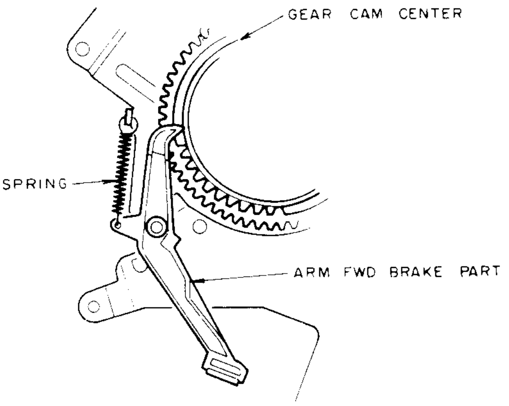

GEAR CAM CENTER
SPRING
ARM FWD BRAKE PART

Fig. 4-11

8) Set the GEAR TOGGLE (TU) and (S) to the unloaded position with your fingers. At this time match the marks of the GEAR TOGGLE (TU) and (S) as shown in Fig. 4-12.

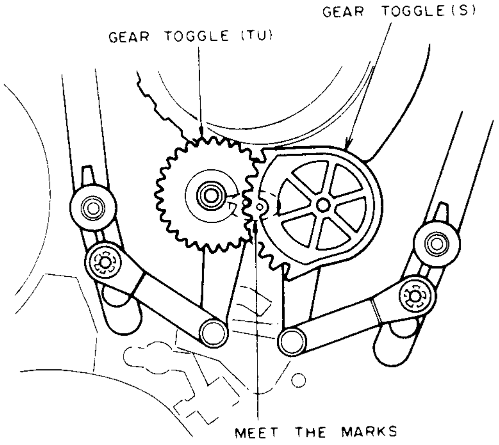

GEAR TOGGLE (S)
GEAR TOGGLE (TU)
MEET THE MARKS

Fig. 4-12

9) Attach the LOADING MECHA. BLK with holding the GEAR TOGGLE (TU) in the direction of the arrow as shown in Fig. 4-13. Tighten the LOADING MECHA BLK with four screws Ⓐ and Ⓑ.

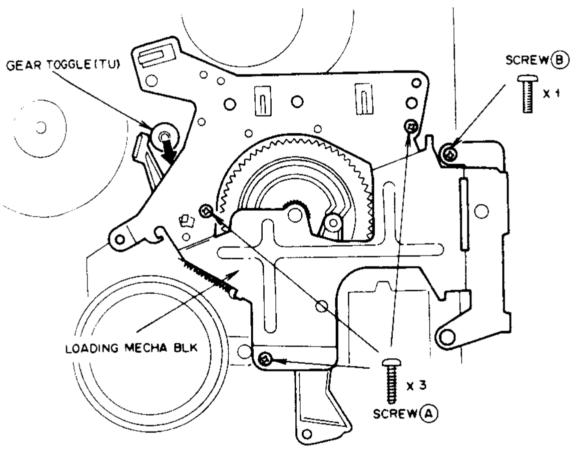

GEAR TOGGLE(TU)
SCREWⒷ
x1
LOADING MECHA BLK
x3
SCREWⒶ

Fig. 4-13

10) Coincide the marks of MODE SELECT SW and attach the MODE SELECT SW BLK onto the LOADING MECHA BLK as shown in Fig. 4-14. Tighten the MODE SELECT SW BLK with a screw Ⓒ.

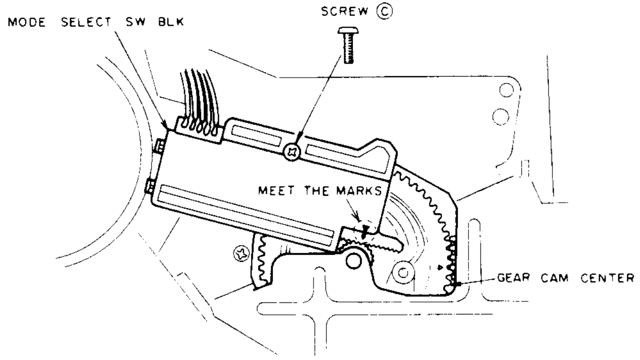

MODE SELECT SW BLK
SCREW Ⓒ
MEET THE MARKS
GEAR CAM CENTER

Fig. 4-14

11) Attach the BELT IDLER as shown in Fig. 4-15.

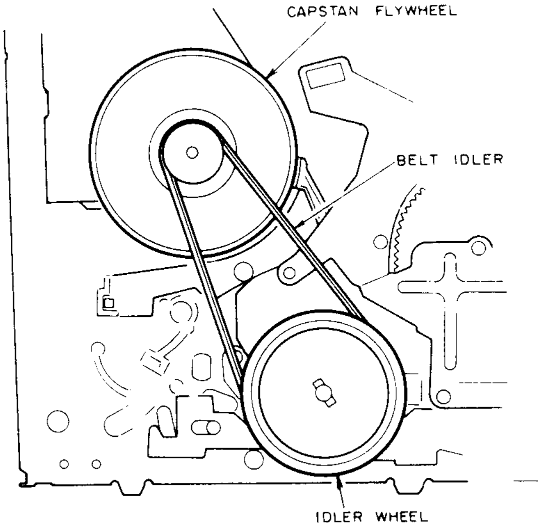

CAPSTAN FLYWHEEL
BELT IDLER
IDLER WHEEL

Fig. 4-15

12) Attach the LOADING DRIVE BLK and tighten with a screw Ⓓ.

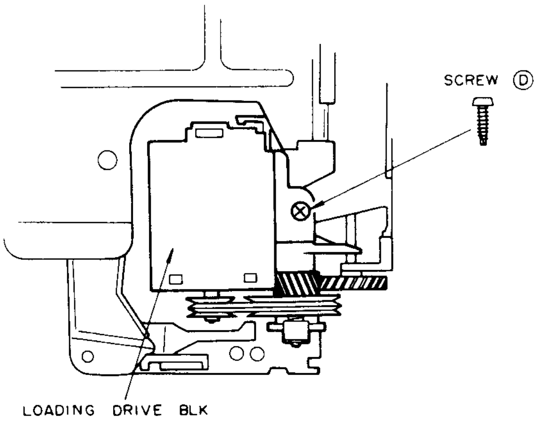

SCREW Ⓓ
LOADING DRIVE BLK

Fig. 4-16

4-3. UPPER DRUM (HEAD DRUM REPLACEMENT)

4-3-1. REMOVAL OF UPPER DRUM

1) Unsolder the four RELAY LEADS and remove two upper drum fixing screws.
2) Gently lift and remove the UPPER DRUM.

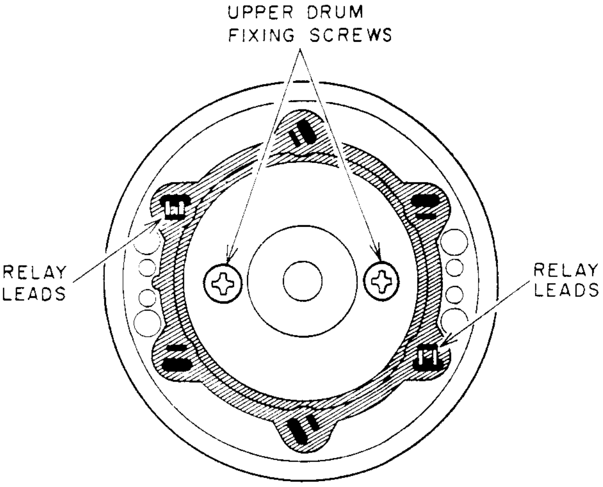


Fig. 4-17

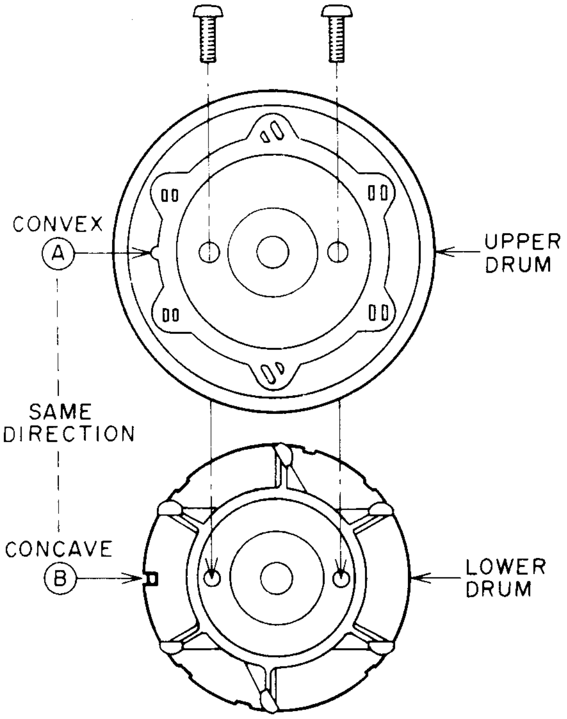


Fig. 4-18

4-3-2. INSTALLATION OF UPPER DRUM

1) Install the UPPER DRUM to the LOWER DRUM so that upper drum convex Ⓐ and lower drum concave Ⓑ become same direction.

NOTE: Height precisior is required for the proper performance, and the head tips are fragile, so the following points should be noted when replacing the UPPER DRUM BLOCK

(a) Do not loosen the set screw on the collar pre-load.
(b) Before fixing, clean both surfaces where the upper drum and the rotary transformer part meet with alcohol.
(c) When installation of the UPPER DRUM, if it does not go on to the shaft easily, clean the hole in the UPPER DRUM with alcohol and put a little oil on the shaft.
(d) Make sure that the upper drum fixing screw holes on the rotary transformer part and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.
(e) Tighten the two upper drum fixing screws alternately and gradually. Tighten them at 6 kg-cm torque.

4-3-3. AFTER REPLACEMENT

After replacement, the following adjustments are necessary for the proper performance.

1) Control head phase adjustment. (Tape transport adj. 5-2-4)
2) PB switching point adjustment. (Electrical adj. Step 2)
3) Video REC current adjustment. (Electrical adj. Step 9)

4-4. DRUM MOTOR REPLACEMENT

1) Disconnect the connector P102 from the Drum Motor P.C. Board.
2) Remove two screws Ⓐ then remove the ROTARY PLATE.

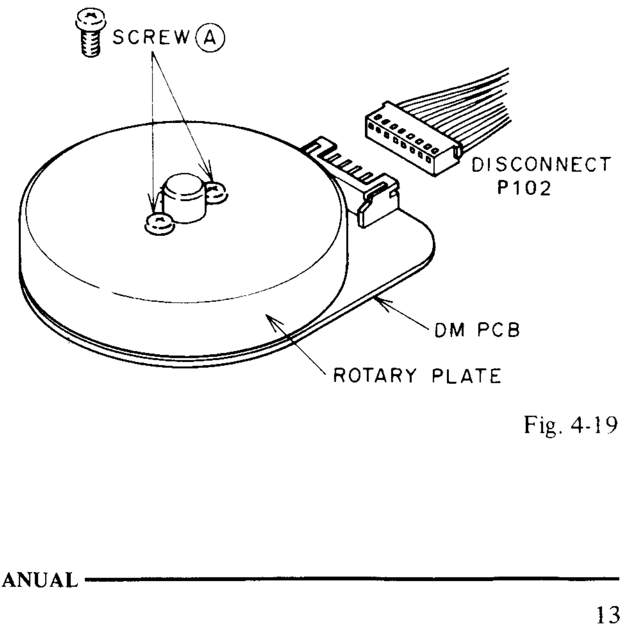


Fig. 4-19

3) Remove three screws Ⓑ then replace the DRUM MOTOR.

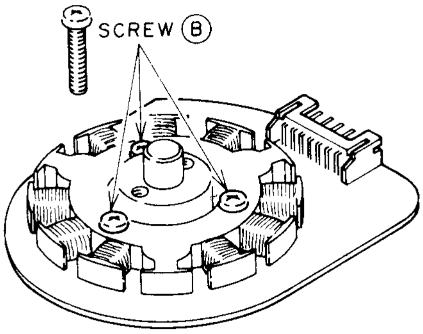


Fig. 4-20

4) Attach the ROTARY PLATE to the DRUM MOTOR so that the rotary plate hall ⓐ and collar preload hall ⓑ are in a opposite direction.

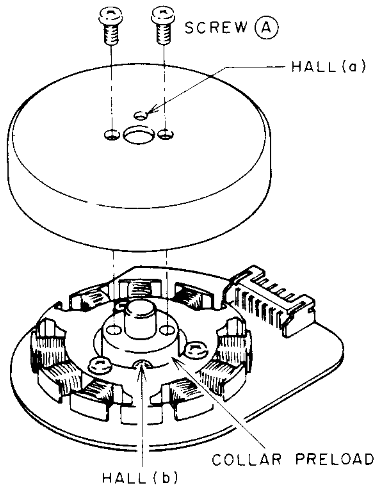

SCREW Ⓐ
HALL (a)
COLLAR PRELOAD
HALL (b)

Fig. 4-21

V. MECHANICAL ADJUSTMENT

5-1. BACK TENSION ADJUSTMENT

1) Remove the EJECTOR BLOCK. (Refer to 4-1-1 REMOVING THE EJECTOR BLOCK.)
2) Press the POWER button to turn ON the VCR. the VCR will enter the tape loaded mode without cassette tape.
3) In the play mode, loosen the screw Ⓐ and set the TENSION ARM position to the correct position as shown in Fig. 5-1 by the tension band holder position, then tighten the screw Ⓐ.

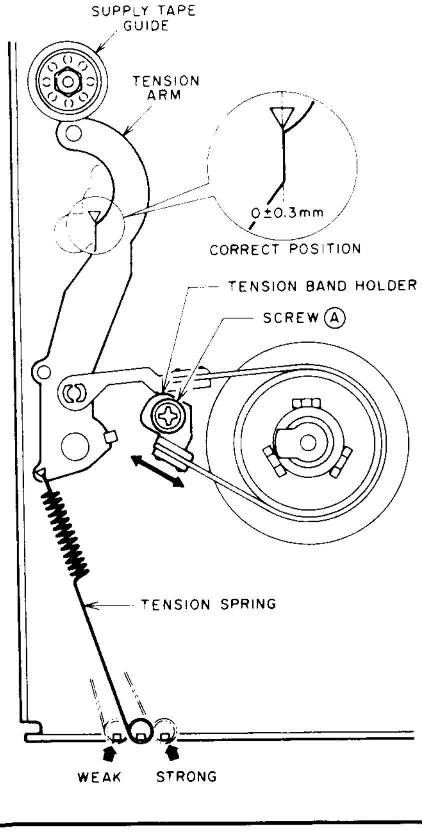

SUPPLY TAPE GUIDE
TENSION ARM
0±0.3mm
CORRECT POSITION
TENSION BAND HOLDER
SCREW Ⓐ
TENSION SPRING
WEAK
STRONG

Fig. 5-1

4) Press the POWER button to turn OFF.
5) Set the reference tape TF-532CBS (AT-751360) and put some weight on the reference tape as a stabilizer.
6) Press POWER button and PLAY button.
7) Observe the TV screen and adjust V-HOLD for TV so that switching point appears on the TV screen as shown in Fig. 5-2.
8) Select the hook position of the TENSION SPRING where the smallest skew should be obtained.

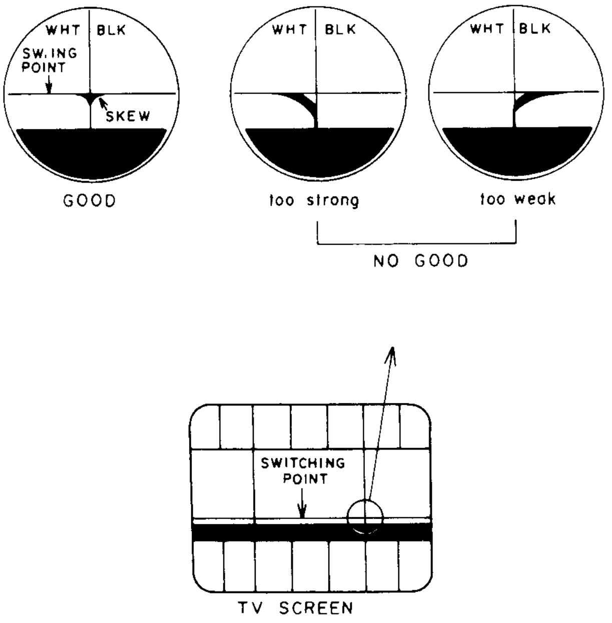

WHT
BLK
SW. ING POINT
SKEW
GOOD
WHT
BLK
too strong
WHT
BLK
too weak
NO GOOD
SWITCHING POINT
TV SCREEN

Fig. 5-2

5-2. TAPE TRANSPORT ADJUSTMENTS

5-2-1. TAPE CURL ADJUSTMENT AT THE TAKE-UP TAPE GUIDE

1) Play back the reference tape TF-530RFS (AT-751775).
2) Turn the screw ⓐ on the A/C HEAD BLK until the edge of the tape barely touches the lower part of TAKE-UP TAPE GUIDE without any curl or wrinkle.

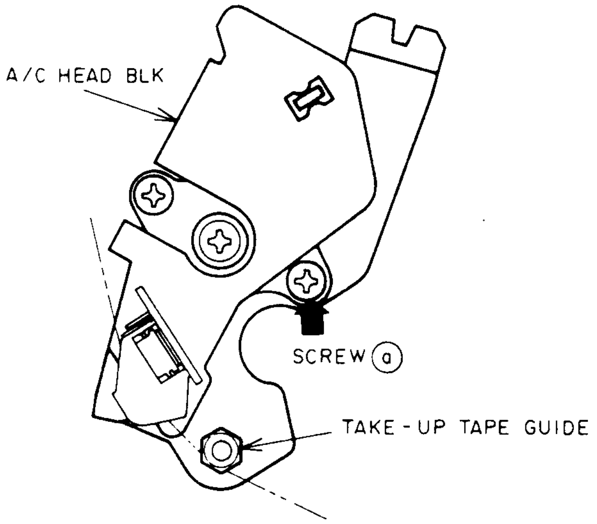

A/C HEAD BLK
SCREW ⓐ
TAKE-UP TAPE GUIDE

Fig. 5-3

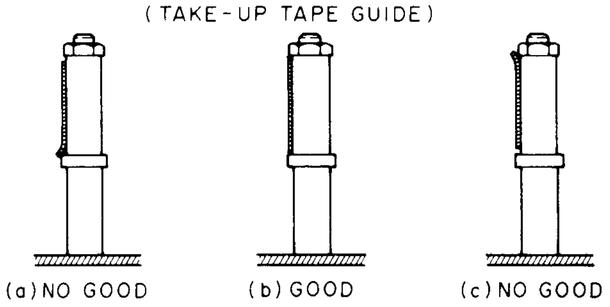

(TAKE-UP TAPE GUIDE)
(a) NO GOOD
(b) GOOD
(c) NO GOOD

Fig. 5-4

5-2-2. CONFIRMATION OF TAPE CURL AT THE SUPPLY TAPE GUIDE

Confirm that the edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE without any curl or wrinkle.

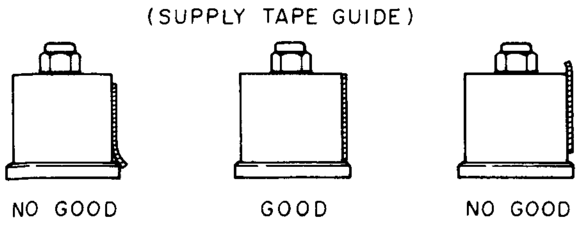

(SUPPLY TAPE GUIDE)
NO GOOD
GOOD
NO GOOD

Fig. 5-5

5-2-3. AUDIO HEAD AZIMUTH ADJUSTMENT

1) Connect an AC volt meter or an oscilloscope to AUDIO OUT jack on the rear panel.
2) Play back the reference tape TF-530RFS (AT-751775).
3) Adjust the screw ⓑ to obtain the maximum audio output.

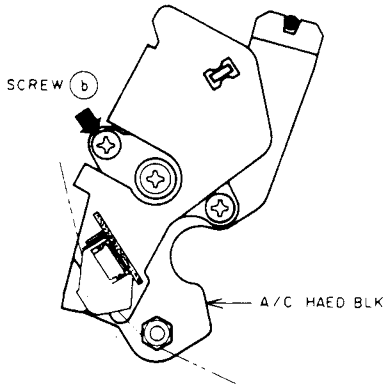

SCREW ⓑ
A/C HAED BLK

Fig. 5-6

5-2-4. CONTROL HEAD PHASE ADJUSTMENT

1) Connect an oscilloscope to TP202 (ENVE) on the MAIN P.C. Board.
2) Play back the reference the TF-530RFS (AT-751775).
3) Press the TRACKING button [<] or [>] on the front panel until "T" mark can be seen in the center position as shown in Fig. 5-7.
4) Insert a sharpness screwdriver into A/C HEAD BASE and hall ⓐ as shown in Fig. 5-8.
5) Move the A/C HEAD BASE by moving a screwdriver in the directions of the arrow as shown in Fig. 5-8 to obtain the maximum RF output.

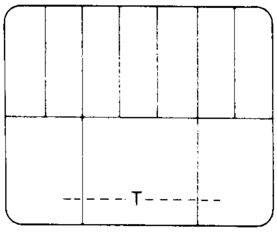


Fig. 5-7 On the TV screen

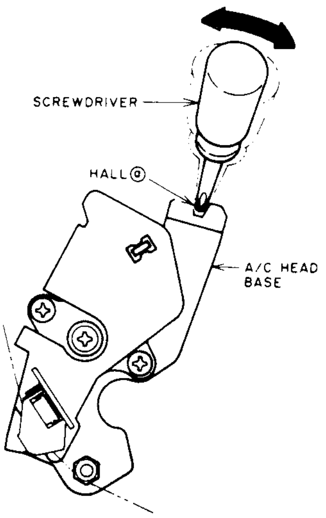

SCREWDRIVER
HALL ⓐ
A/C HEAD BASE

Fig. 5-8

5-2-5. ARM REVIEW HEIGHT ADJUSTMENT

1) Play back the beginning part of E-180 tape and set the unit in REVIEW mode with pressing REW button.
2) Turn the ARM REVIEW height nut ⓐ so that the edge of the tape barely touches the lower part of TAKE-UP TAPE GUIDE without any curl or wrinkle between TAKE-UP TAPE GUIDE and CAPSTAN SHAFT.

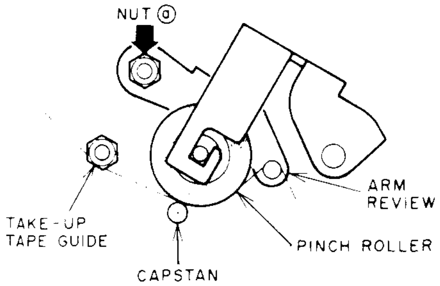

NUT ⓐ
ARM REVIEW
TAKE-UP TAPE GUIDE
PINCH ROLLER
CAPSTAN

Fig. 5-9

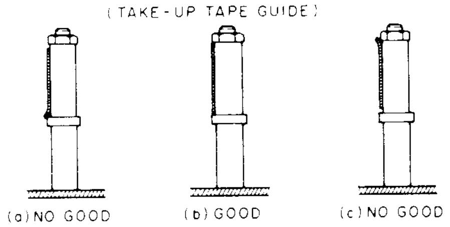

(TAKE-UP TAPE GUIDE)
(a) NO GOOD
(b) GOOD
(c) NO GOOD

Fig. 5-10

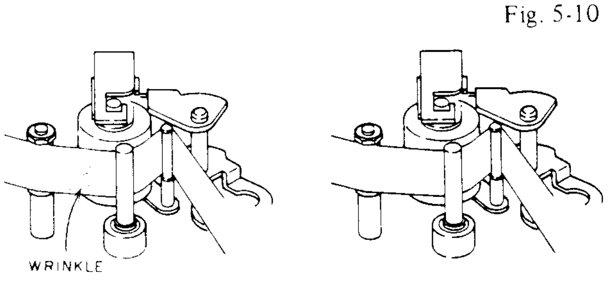

WRINKLE
NO GOOD
GOOD

Fig. 5-11

5-2-6. LOADING LEADER HEIGHT ADJUSTMENTS

1) Slightly loosen the set screw at lower part of the LOADING LEADERS (L), (R) so that LOADING LEADERS can be adjusted with reasonable tightness (Refer to Fig. 5-12.)
2) Play back the reference tape TF-530RFS (AT-751775).
3) Connect an oscilloscope to TP202 (ENVE) on the MAIN P.C. Board.
4) Turn the LOADING LEADER heads with a screw driver to obtain flat RF envelope as ideal envelope shown in Fig. 5-13.
5) After the adjustments, tighten the LOADING LEADER set screws.

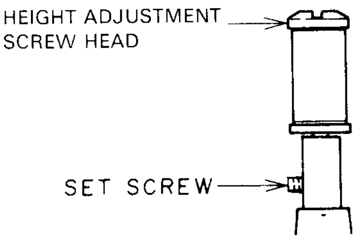

HEIGHT ADJUSTMENT SCREW HEAD
SET SCREW

Fig. 5-12

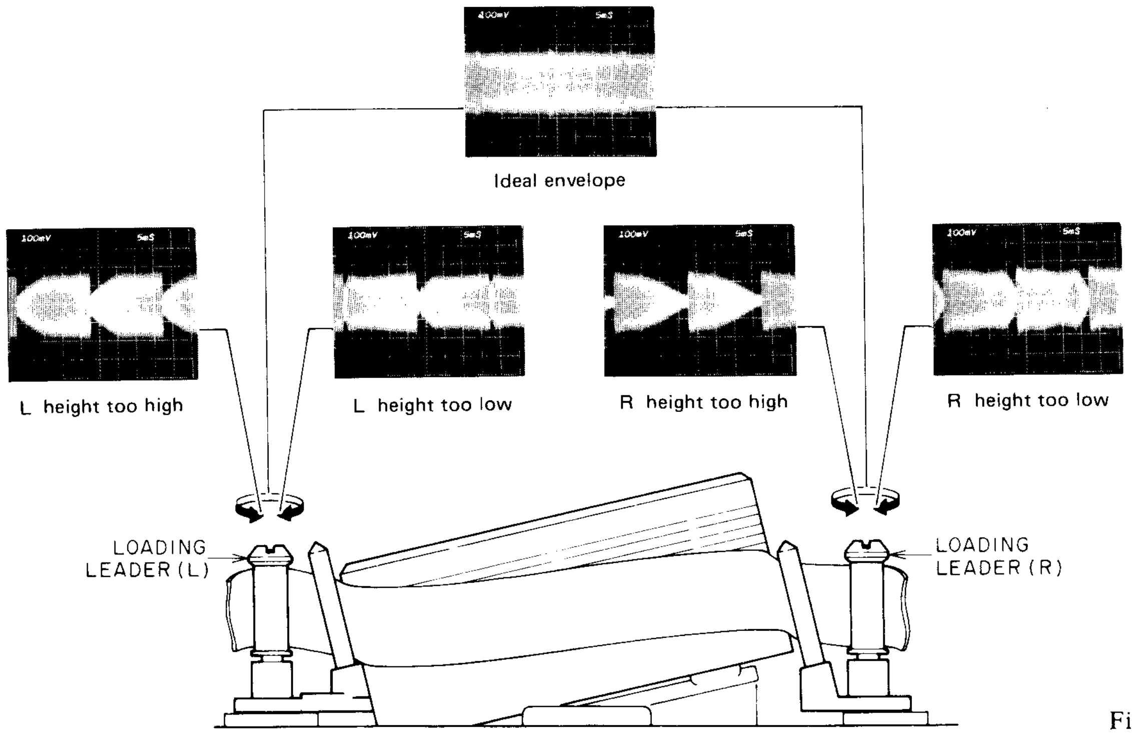

100mV
5mS
Ideal envelope
L height too high
L height too low
R height too high
R height too low
LOADING LEADER (L)
LOADING LEADER (R)

Fig. 5-13

5-2-7. A/C HEAD HEIGHT ADJUSTMENTS

1) Play back the test tape TF-526HH (AT-751778).
2) Connect the oscilloscope CH-1 to AUDIO OUTPUT and CH2 to TP500.
3) Turn the hexagon screw to obtain 1/2 of the output level of either CH1 or CH2 whichever has output signal.

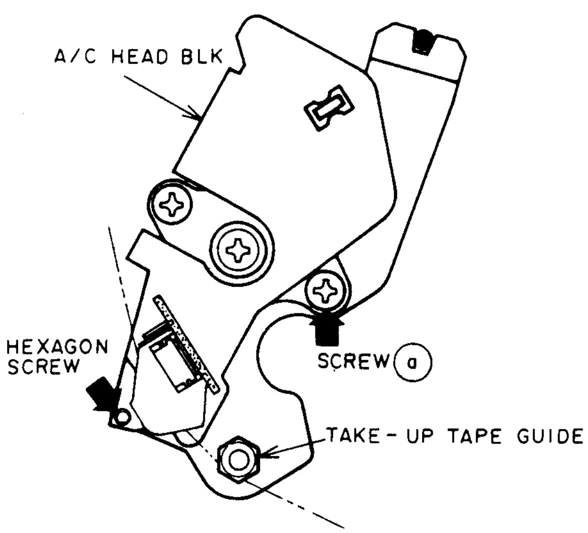
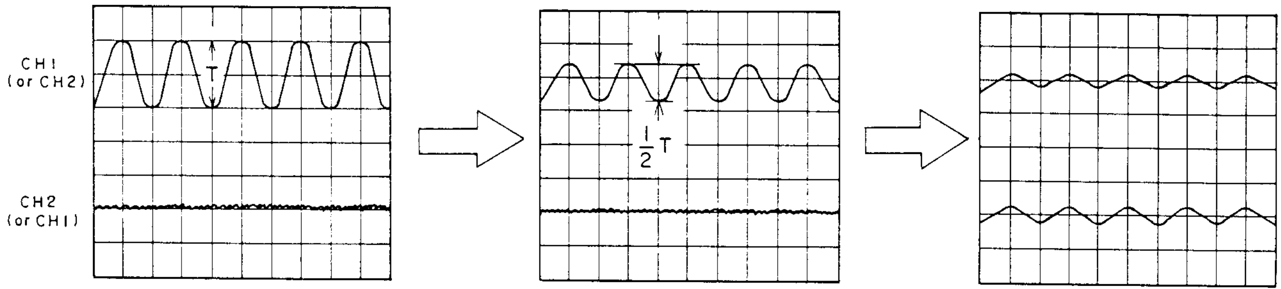

A/C HEAD BLK
HEXAGON SCREW
SCREW ⓐ
TAKE-UP TAPE GUIDE

Fig. 5-14


CH1 (or CH2)
CH2 (or CH1)
T
$\frac{1}{2}$T

(a) CH1 = T

(b) CH1 = $\frac{1}{2}$T

(c) CH1 = CH2

Fig. 5-15

4) Slightly turn the screw ⓐ until the tape edge barely tuches the lower part of the TAKE-UP TAPE GUIDE without any curl as shown in Fig. 5-4.
5) Confirm that both signals of CH1 and CH2 are nearly same level. Repeat the adjustments 3), 4) if it is not nearly same level.

VI. ELECTRICAL ADJUSTMENT

Precautionary items prior to adjustments

1. The color bar generator output should be 1.0 Vp-p.
2. Video output terminal should be terminated with 75 ohms (dummy or load).

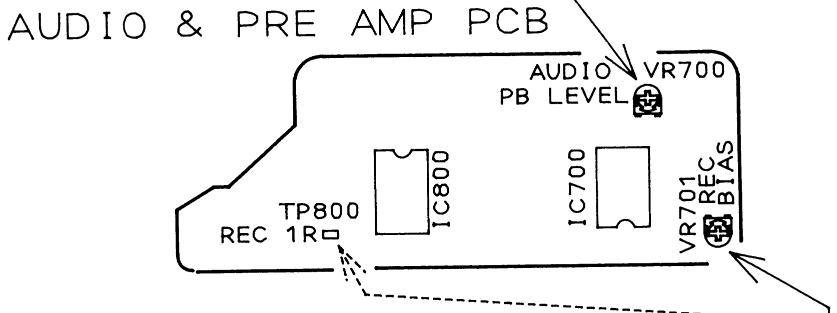
Required following test tapes.

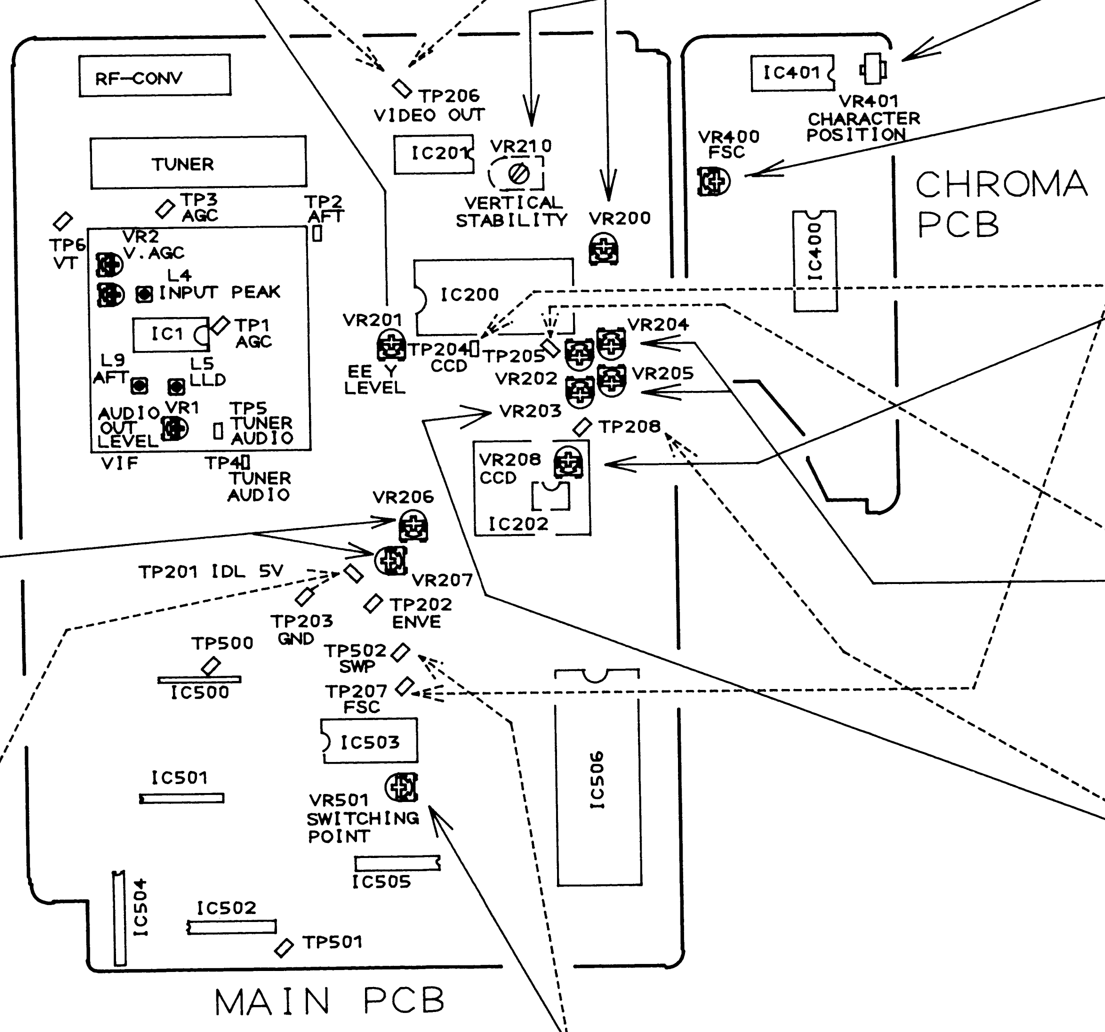
Test tape	Parts No.
TF-527BL	AT-711880
TF-530RFS	AT-751775
TF-532CBS	AT-751360

STEP	ADJUSTMENT ITEM
1.	MODE and INPUT SIGNAL/TEST TAPE
2.	TEST POINT and ADJ. part
3.	RESULT & REMARKS

ADJ. PART →

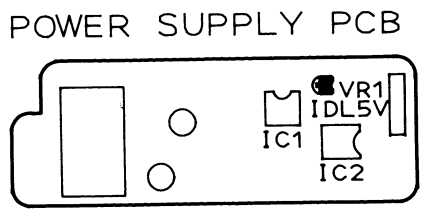
TEST POINT - - →


AUDIO & PRE AMP PCB
AUDIO PB LEVEL
VR700
TP800
REC 1R
IC800
IC700
VR701 REC BIAS


RF-CONV
TUNER
TP3 AGC
TP2 AFT
TP6 VT
VR2 V.AGC
L4 INPUT PEAK
IC1
TP1 AGC
L9 AFT
L5 LLD
AUDIO OUT LEVEL
VR1
TP5 TUNER AUDIO
VIF
TP4 TUNER AUDIO
TP206 VIDEO OUT
IC201
VR210
VERTICAL STABILITY
VR200
IC200
VR201
EE Y LEVEL
TP204 CCD
TP205
VR204
VR202
VR205
VR203
TP208
VR208 CCD
IC202
VR206
TP201 IDL 5V
VR207
TP202 ENVE
TP203 GND
TP500
IC500
TP502 SWP
TP207 FSC
IC503
IC501
VR501 SWITCHING POINT
IC505
IC506
IC504
IC502
TP501
MAIN PCB
IC401
VR401 CHARACTER POSITION
VR400 FSC
IC400
CHROMA PCB

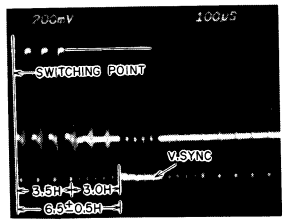
1 IDL 5V

1. "E-E" (Stop mode)
2. TP201 & VR1
3. • Connect DC volt meter to TP201.
   • 5 ± 0.05 V DC


POWER SUPPLY PCB
VR1
IDL5V
IC1
IC2

2 PB SWITCHING POINT

1. "PB" test tape TF-530RFS
2. TP502 (SWP), TP206 (V-OUT) & VR501
3. • Connect oscilloscope to TP502 (SWP) for triggering and connect to TP206 (V-OUT).
   • Adjust VR501 so that switching point becomes 6.5 ± 0.5 H from the V-SYNC.

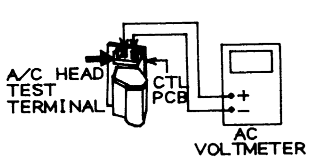


3 AUDIO PB LEVEL

1. "PB" test tape TF-527BL
2. AUDIO OUT & VR700
3. • Connect AC voltmeter for AUDIO OUT.
   • −5.0 ± 0.5 dBs

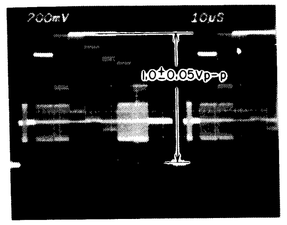
4 AUDIO REC BIAS

1. "REC" (no signal input)
2. Test terminal on the A/C HEAD & VR701 (REC BIAS)
3. • Connect AC voltmeter to test terminal.
   • 3.0 ± 0.1 mV


A/C HEAD
TEST TERMINAL
CTL PCB
AC VOLTMETER

5 VIDEO E-E LEVEL

1. "E-E" (Stop mode) input PAL color bar signal.
2. TP206 (V-OUT) & VR201
3. • Connect oscilloscope to TP206.
   • 1.0 ± 0.05 Vp-p

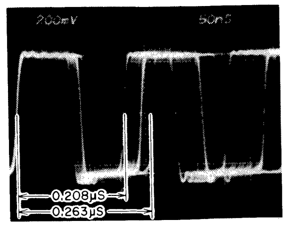


6 FSC

1. "E-E" (Stop mode) input PAL color bar signal.
2. TP207 (FSC) & VR400
3. • Connect FRQ counter to TP207 (FSC)
   • 4.433619 MHz ± 10 Hz

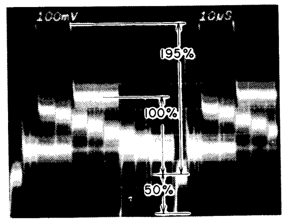
7 CARRIER SET & DEVIATION

1. "REC" PAL color bar signal.
2. TP208 (REC FM) & VR203 (CARRIER), VR202 (DEVIATION)
3. • Connect oscilloscope to TP208 (REC FM)
   • VR203 (CARRIER) . . . . 0.263 µs (3.8 MHz)
   • VR202 (DEVIATION) . . 0.208 µs (4.8 MHz)



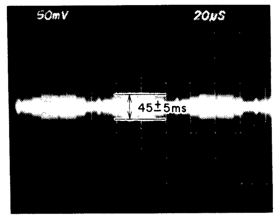
8 WHITE & DARK CLIP

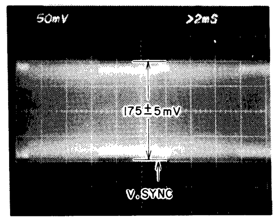
1. "REC" PAL color signal.
2. TP205 (W/D CLIP) & VR205 (W. CLIP), VR204 (D. CLIP)
3. • Connect oscilloscope to TP205 (W/D CLIP)
   • VR205 (WHITE CLIP) . . . 195%
   • VR204 (DARK CLIP) . . . 50%



9 VIDEO REC CURRENT

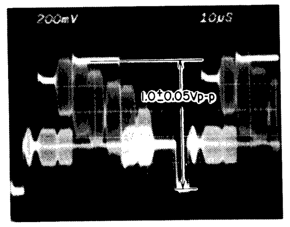
1. "REC" PAL color bar signal.
2. TP800 (REC I.R) & VR207 (CHROMA).
3. • Connect oscilloscope to TP800 (REC I.R)
   • Turn the VR206 (Y) fully counterclockwise.
   • Adjust VR207 (CHROMA) so that chroma REC current becomes 45 ± 5 mVp-p.
   • Adjust VR206 (Y) so that Y REC current becomes 175 ± 5 mVp-p at V SYNC area.





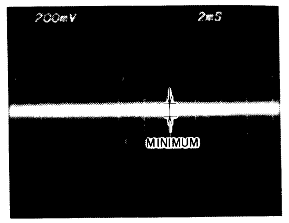
10 REC/PB VIDEO LEVEL

1. "REC" – "PB" PAL color bar signal.
2. TP206 (V-OUT) & VR200 (PB LEVEL)
3. • Connect oscilloscope to TP206 (V-OUT)
   • 1.6 ± 0.05 Vp-p



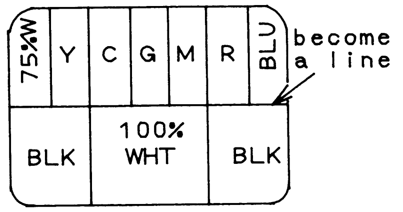
11 CCD

1. "PB" test tape TF-532CBS
2. TP204 (CCD) & VR208 (CCD)
3. • Connect oscilloscope to TP204 (CCD).
   • Adjust VR208 so that CCD level becomes minimum.



12 SP STILL VERTICAL STABILITY

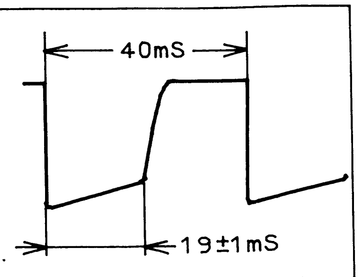
1. "PB" → "PAUSE/STILL" (Test tape AF-532CBS)
2. TV screen & VR210
3. In the PB/STILL mode observe the TV scren and adjust VR210 until no picture vibration is obtained.


75%W
Y
C
G
M
R
BLU
become a line
BLK
100% WHT
BLK

13 TRACKING PRESET

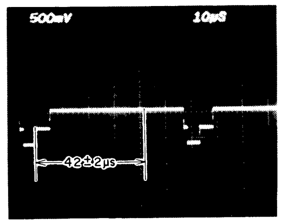
Tracking preset data can be adjusted as following.

1. Plug in the AC power cord with the POWER, EJECT and REW buttons pressed steadily at the same time.
2. In an SP play mode, tracking data 0 to 3F which will be displayed in the FLD CH. No. window may be set to 1F or 20 with the tracking buttons. At this time, tracking M.M waveform, IC 503 pin 24, should be within 19 ± 1 ms.
3. Press the BAND selector button to memorize the tracking preset data.
4. Confirm that the maximum RF output (at TP202) should be obtained on REC/PB mode and tracking marker "T" is in the center on the monitor screen.



14 CHARACTER POSITION

1. "E-E" (Stop mode) No signal input
2. TP206 (V-OUT) & VR401 (CHARACTER POSITION)
3. • Connect oscilloscope to TP206 (V-OUT).
   • Press EXT and CLOCK buttons on the remote control.
   • Adjust VR401 so that the time constant becomes 42 ± 2 µS as shown.



VII. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of eachpart. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individ ual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] : AAL (U.S.A)
[B] : BEAB (England)
[C] : CSA (Canada)
[E] : CEE (Europe)
[J] : JPN (Janan)
[S] : SAA (Australia)
[U] : U/T (Universa Area)
[V] : VDE (W. Germany)
[Y] : Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LÉ FABRICANT.

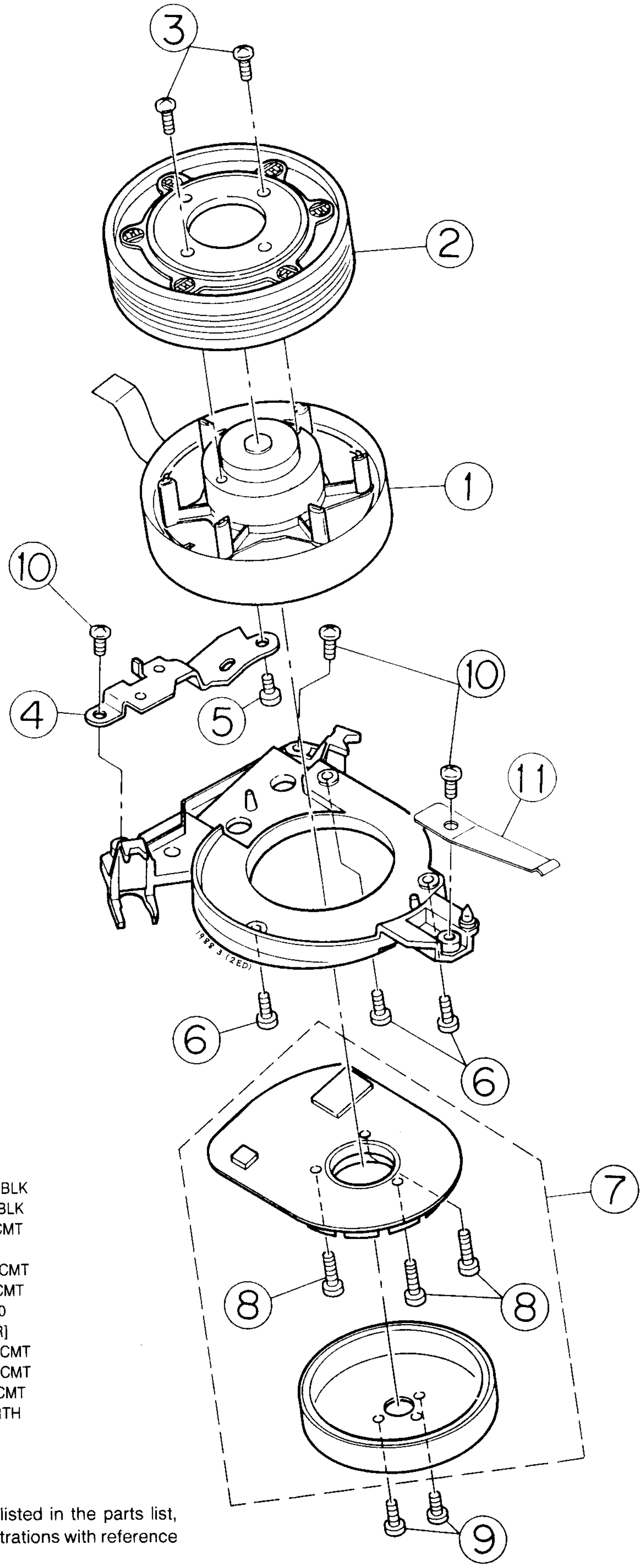
1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	BL-V1075A130A	PINCH ROLLER BLK VS-35EA
2	BM-373098	MOTOR DVX-67A2R2 [CAPSTAN MOTOR]
3	BM-367631	MOTOR PART [LOADING MOTOR][M901]
4	BM-M3225A010A	MOTOR SM-250 [DRUM MOTOR]
5	BR-367618	DISK(S)PART
6	BR-367619	DISK(T)PART
7	*BT-380096J1	TRANS POW V1084EO [EO-E,EO-V]
8	BV-V1075A410C	LOWER DRUM BLK
9	BV-373938	RF CONVERTER MDLK-3D063A EO [EO-E,EO-V]
10	BV-373939	RF CONVERTER MDLK2D103A EV [EV]
11	BV-373935	RF CONVERTER MDLK2S100A EA [EA]
12	BV-373936	RF CONVERTER MDLK3B063A EK,ES [ES]
13	BV-V1075A070A	S.LOADING LEADER BLK VS-35EA
14	BV-V1075A080A	T.U LOADING LEADER BLK VS-35EA
15	BV-V1075A420G	UPPER DRUM BLK
16	EC-368118	C DBL LAYER EECS5R5H 224 5.5DC [ES,EV]
17	EC-368823	C DBL LAYER EECS5R5H 473Z5.5DC [EA,EO-E,EO-V]
18	ED-373101	D LED LN59AK INFRARED [SENSOR PCB D1]
19	ED-376111	D LED SE303AC INFRARED
20	ED-383034J	D LED SLR-54PC3F L,M GREEN [QUICK START]
21	ED-382358J	D LED SLR34PC 3F K,L,M GREEN [AFC/MEMO]
22	ED-360409	D PHOTO PN323B
23	*ED-379298	D SILICON DBA20B 100/2.0A
24	ED-380089J	D SILICON DFC15TC-FD1 200/1.5A
25	*ED-378455	D SILICON DSA12TG 600/1.2A
26	ED-371512	D SILICON ERA22-04Y F05 400/.5
27	*ED-380715J	D SILICON ERB83-004 40/1.7A
28	ED-344280	D SILICON H GMA-01-FY2 F05
29	ED-307572	D SILICON H 1SS131
30	ED-624903	D SILICON H 1S2473
31	*ED-367202	D SILICON S5566B F12
32	*ED-367693	D SILICON S5566G(LC-7)F12
33	*ED-370990	D SILICON 1SR35-100AHS F10
34	ED-381585J	D ZENER H HZS11B1J F05
35	ED-376598	D ZENER H HZS36B3J F05
36	ED-365699	D ZENER H HZS5.6B1J F05
37	ED-346594	D ZENER H HZ3 B3
38	ED-346586	D ZENER H HZ33-3L
39	ED-346525	D ZENER H HZ6A3L
40	ED-346526	D ZENER H HZ6B1L
41	ED-351419	D ZENER H HZ7B3L
42	ED-346541	D ZENER H HZ9B2L
43	ED-346543	D ZENER H HZ9C1L
44	ED-346546	D ZENER H HZ9C3L [EO-E,EO-V]
46	EE-380256J	TV TUNER TEMD1-022A EM [EV]
47	EE-373927	TV TUNER TEMS1-005A EA [EA]
48	EE-373932	TV TUNER TEMZ1-011A [ES]
49	EE-385892J	TV TUNER TERE1-001A EO [EO-E,EO-V]
52	*EF-601301	FUSE SEMKO T 250V 2.00A
53	*EF-601942	FUSE SEMKO T 250V 630MA
54	*EF-258344	FUSE SEMKO T 250V 800MA
55	EH-378541J	COMP R RGLE3X 473J
56	EH-378540J	COMP R RGLE5X 103J
57	EH-383057J	COMP R RGLE5X 473J
58	EH-386636J	COMP R RGLE6X 103J
59	EH-371021	DL EFD-HR124A13J
60	EH-379367	FILTER CE CDA5.5ME23A [EA,EV,EO-E,EO-V]
61	EH-379368	FILTER CE CDA6.0ME23A [ES]
62	EH-373916	FILTER CE SAF36.9MZ70Z [EA]
63	EH-376120	FILTER CE SAF38.9MW70Z [ES]
64	EH-376119	FILTER CE SAF38.9MZH71Z [EO-V]
65	EH-373914	FILTER CE SAF38.9MZ70Z [EV,EO-E]
67	EH-373920	FILTER CE SFE5.5MB [EA,EV,EO-E]
68	EH-373921	FILTER CE SFE6.0MB [ES]
69	EH-373918	FILTER CE TPS5.5MB [EA,EV,EO-E]
70	EH-368948	FILTER CE TPS5.5MW [EO-V]
71	EH-373919	FILTER CE TPS6.0MB [ES]
72	EH-360339	FILTER LC AP AF-25P [EA,EV,EO-E,EO-V]
73	EH-364045	FILTER LC FF-78P
74	EH-373144	FILTER LC LP LF-69P-02 5P
75	EH-368821	FILTER LC LP MYV-23R
76	EH-368136	FILTER LC TPS 134-5052-04 [EO-V]
77	EI-380085J	IC AN3231K
78	*EI-376794J1	IC BA10393
79	EI-373981J1	IC BA10393N
80	EI-367572	IC BA15218
81	EI-373980	IC BA15218N
82	EI-353421	IC BA6229
83	EI-360316	IC BA6305
84	*EI-368152	IC BA707
85	EI-354095	IC BA718
86	EI-380086J	IC BU2735AS
87	EI-373954	IC CXK1006L
88	EI-373946	IC LA7292
89	EI-378177	IC MB88525-192G LCXSYP3
90	EI-373966	IC MSM6965-3RS
91	EI-379020	IC M50455-073SP
92	EI-368809	IC M51496P
93	EI-380090J	IC NJM2352D
94	EI-373955	IC S8053ALR
95	EI-330986	IC TA78L009AP [EO-E,EO-V]
96	EI-373023	IC TA8632N
97	EI-200573	IC TC4053BP
98	EI-367271	IC UPC1490HA
99	EI-380084J	IC UPC2313CA
100	EI-337530	IC UPC574J
101	EI-376112	IC UPD6122G
102	EI-375472	IC UPD75208CW-105 LCXOPE3 [EO-V]
103	EI-380580J	IC UPD75208CW-175 LLXOPE1 [EXCEPT EO-V]
104	EI-347991	OSC CE CSA6.00MS 6MHZ
105	EI-376113	OSC CE CSB455EB
106	EI-388110J	OSC CE CST4.19MG 4.194MHZ

Ref. No.	Part No.	Description
107	EI-368825	OSC X'TAL MX-38T 32.768KHZ
108	EI-309878	OSC X'TAL 4.433619MHZ
109	EM-373956	IND FL FV132 DOUBLE
110	*EO-368465	COIL LF LF4N [EO-V]
111	EO-375471	COIL OSC 1 S033344
112	*EQ-376837	RELAY POW VB-100TBU-5 2TR 100V
113	*ER-318400	R CB H S10 FS RDS 1/4W 680J
114	*ER-378650J	R FUSE H S10 ERQ16NK 1/6W R47J [EO-V,EO-E]
115	ER-336756	R OMF H FS 1W R47J
116	ER-376864	R OMF H S12 SPR1 1W 274J
117	ES-373099	SW LEAF MTS10110MPC1 [REC SAFTY SW][SW1]
118	ES-381310J1	SW MODE SELECTOR D2ZQ-S2-2 [MODE SELECTOR]
119	ES-380117J	SW SLIDE ESD-1111352 2-01-03N [PRESET]
120	ES-380116J	SW SLIDE ESD-1112252 2-02-02N [IN PUT SELECT]
121	ES-373973	SW SLIDE HSW0810-010 1-01-02S [EA,ES,EK-B] [AUTO-B/W]
122	ES-373974	SW SLIDE HSW0811-020 2-02-03S [EV,EO-E,EO-V][P-B/W-S]
123	ES-349474	SW TACT SKHHAM004A [TRAKING >]
124	ET-361463	DETECTOR ON2170 Q,R [SENSOR PCB PH1]
125	ET-356336	TR DTA114ES
126	ET-360646	TR DTA143ES [EK-B,EO-E,EO-V]
127	ET-368836	TR DTA143TA
128	ET-354415	TR DTA144ES
129	ET-373985	TR DTA144TS
130	ET-353897	TR DTC114ES [EV,EO-E,EO-V]
131	ET-354365	TR DTC114YS
132	ET-354371	TR DTC124ES
133	ET-354364	TR DTC143TS
134	ET-354414	TR DTC144ES
135	*ET-364093	TR 2SA1283 E,F
136	ET-356224	TR 2SA1286 G,H,J F05
137	ET-353899	TR 2SA1317 S,T,U
138	*ET-380630J	TR 2SB1010 [EXCEPT EO-V]
139	*ET-366365	TR 2SB1185 E,F
140	ET-336845	TR 2SB641 Q,R,S,T [EV]
141	*ET-356817	TR 2SB891 Q,R [EO-V]
142	ET-321644	TR 2SC1213 C
143	ET-375777	TR 2SC2926S P,Q
144	ET-355669	TR 2SC3246 G,H,J F05 [EO-E,EO-V]
145	*ET-376818	TR 2SC3247 H,J,K
146	ET-368084	TR 2SC3315 D
147	ET-360137	TR 2SC3330 U,V F05
148	ET-372197	TR 2SC3377 R
149	*ET-376663	TR 2SC3868
150	*ET-366168	TR 2SD1292 Q,R
151	*ET-366677	TR 2SD1761 E,F
152	*ET-380685J	TR 2SD1761 E,F,G
153	*ET-366581	TR 2SD1762 E,F
154	*ET-373025	TR 2SD1944 J1,J2,K
155	EV-380314J	VR ROTARY RK09K1130 L=** B203 [PICTURE]
156	EX-330533	POSISTOR PTH61G27BD3R3N
157	HE-361456	HEAD E HVFMD0005B [FULL ERASE HEAD]
158	HR-387805J	HEAD COMBO HXMZA1031A [AUDIO/CONTROL]
159	MB-373080	BELT IDLER
160	MB-373096	BELT LOADING
161	ML-373075	ARM LOADING BRAKE
162	ML-367614	ARM MAIN BRAKE(S)PART
163	ML-367616	ARM MAIN BRAKE(TU)PART
164	ML-367617	ARM REVIEW BRAKE PART
165	ML-373043	CLUTCH BLK
166	ML-500881	LEVER TENSION BAND PART
167	MZ-500717T	GEAR CAM CENTER
168	MZ-368797T	GEAR CAM JOINT
169	MZ-500707T1	GEAR CAM TENSION
170	MZ-500715T	GEAR FL DRIVE
171	MZ-V1075A090A	GEAR TOGGLE (S) BLK VS-35EA
172	MZ-V1075A100A	GEAR TOGGLE (TU) BLK VS-35EA
173	MZ-500716T	GEAR WHEEL
174	MZ-367628J1	GEAR WORM PART
175	MZ-368794T	GEAR(S)
176	MZ-368795T1	GEAR(T)
177	VT-367622J2	GUIDE ROLLER PART

HEAD DRUM BLOCK

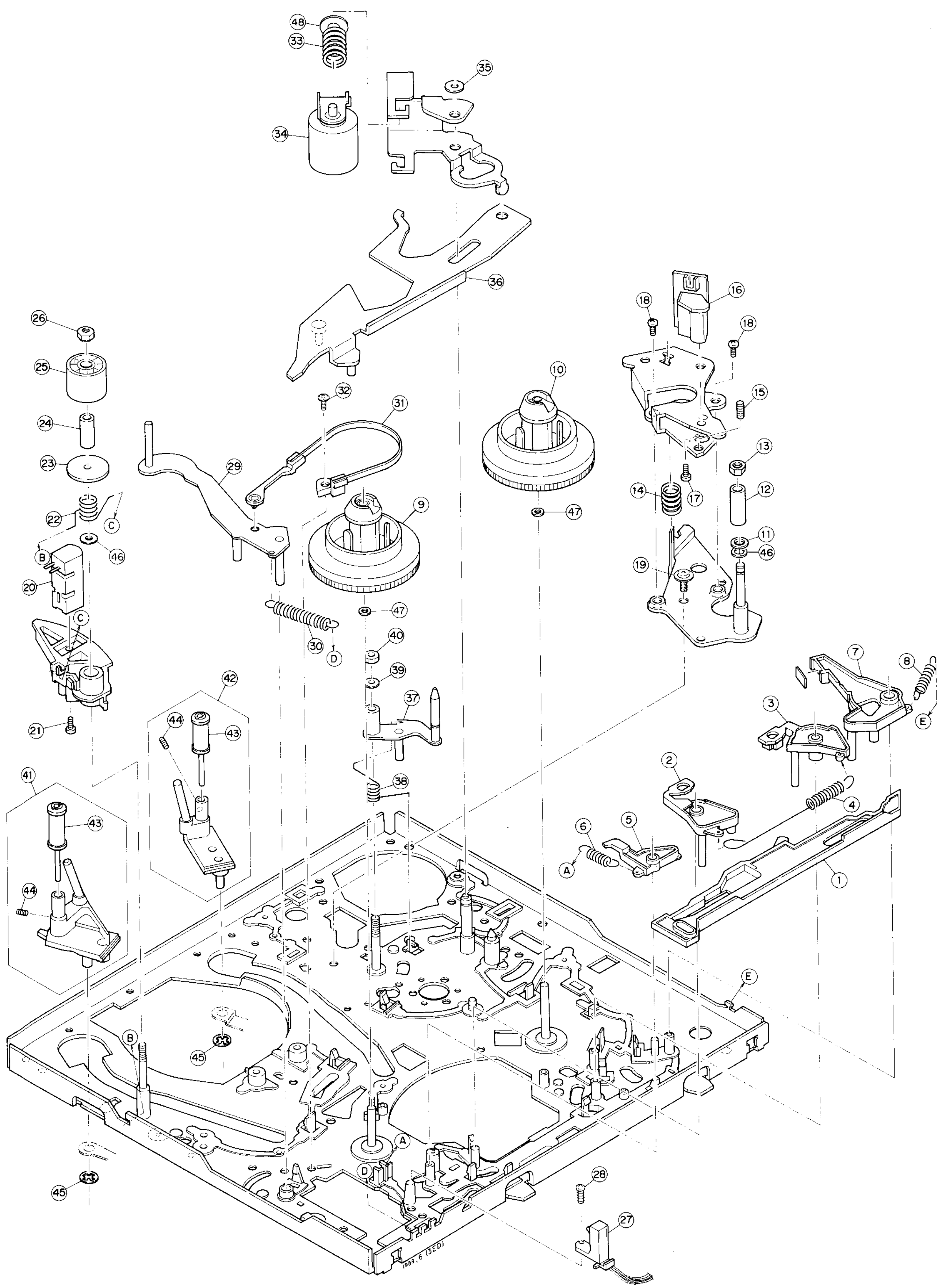


2. HEAD DRUM BLOCK

Ref. No.	Part No.	Description
1	BV-V1075A410C	LOWER DRUM BLK
2	BV-V1075A420G	UPPER DRUM BLK
3	ZS-321298	BID30X08STL CMT
4	VT-373884J1	PLATE EARTH
5	ZS-479474	PAN26X05STL CMT
6	ZS-563444	BID26X08STL CMT
7	BM-M3225A010A	MOTOR SM-250 [DRUM MOTOR]
8	ZS-467796	PAN26X12STL CMT
9	ZS-479474	PAN26X05STL CMT
10	ZS-413785	BID30X12STL CMT
11	ZG-382137J	SP PLATE EARTH

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHA BLOCK (1)



3. MECHA BLOCK (1)

Ref. No.	Part No.	Description
1	MZ-373079	SLIDER BRAKE
2	ML-367614	ARM MAIN BRAKE(S)PART
3	ML-367616	ARM MAIN BRAKE(TU)PART
4	ZG-373548	SP PULL MAIN BRAKE
5	ML-373075	ARM LOADING BRAKE
6	ZG-373534	SP PULL LOAD BRAKE
7	ML-367617	ARM REVIEW BRAKE PART
8	ZG-373535	SP PULL REVW BRAKE
9	BR-367618	DISK(S)PART
10	BR-367619	DISK(T)PART
11	MS-373095	GUIDE TAPE LCX
12	MS-372186J1	GUIDE TAPE(6)
13	ZW-358045	N30STL CMT 3
14	ZG-500792	SP PUSH A/C
15	ZG-373900	6SET30X080SCM PKR CP
16	HR-387805J	HEAD COMBO HXMZA1031A [AUDIO/CONTROL]
17	ZS-373899	PAN20X2.5STL BDY PS1
18	ZS-321298	BID30X08STL CMT
19	ZS-373896	DT BID30X08STL CMT PW080
20	HE-361456	HEAD E HVFMD0005B [FULL ERASE HEAD]
21	ZS-464703	BID20X04STL CMT
22	ZG-374022	SP TORSION ARM FE
23	ZW-373088	FLANGE Z
24	ZW-373089	SPACER
25	MR-373087	ROLLER Z
26	ZW-350839	N30 NYLON
27	ES-373099	SW LEAF MTS10110MPC1 [REC SAFTY SW][SW1]
28	ZS-321298	BID30X08STL CMT
29	BL-367620-A	ARM TENSION PART
30	ZG-373539	SP PULL TENSION
31	ML-500881	LEVER TENSION BAND PART
32	ZS-373532	DT BID30X08STL CMT C080
33	ZG-382153J	SP PUSH P
34	BL-V1075A130A	PINCH ROLLER BLK VS-35EA
35	ZW-373898	SLIT W31X070X050PSL
36	BL-500879T1	PLATE P SLIDER PART
37	BL-368475	ARM REVIEW GUIDE PART
38	ZG-373530	SP TORSION REVIEW ARM
39	ZW-324417	PW31X060X050PSL
40	ZW-350839	N30 NYLON
41	BV-V1075A070A	S.LOADING LEADER BLK VS-35EA
42	BV-V1075A080A	T.U LOADING LEADER BLK VS-35EA
43	VT-367622J2	GUIDE ROLLER PART
44	ZS-374458	6SET20X030SCM PKR FP
45	ZW-332843	RETAINING RING GRIP 380STL ACP
46	ZW-287458	PW33X060X030BRS NI3
47	ZW-324417	PW31X060X050PSL
48	ZW-292770	PW41X100X050STL CMT

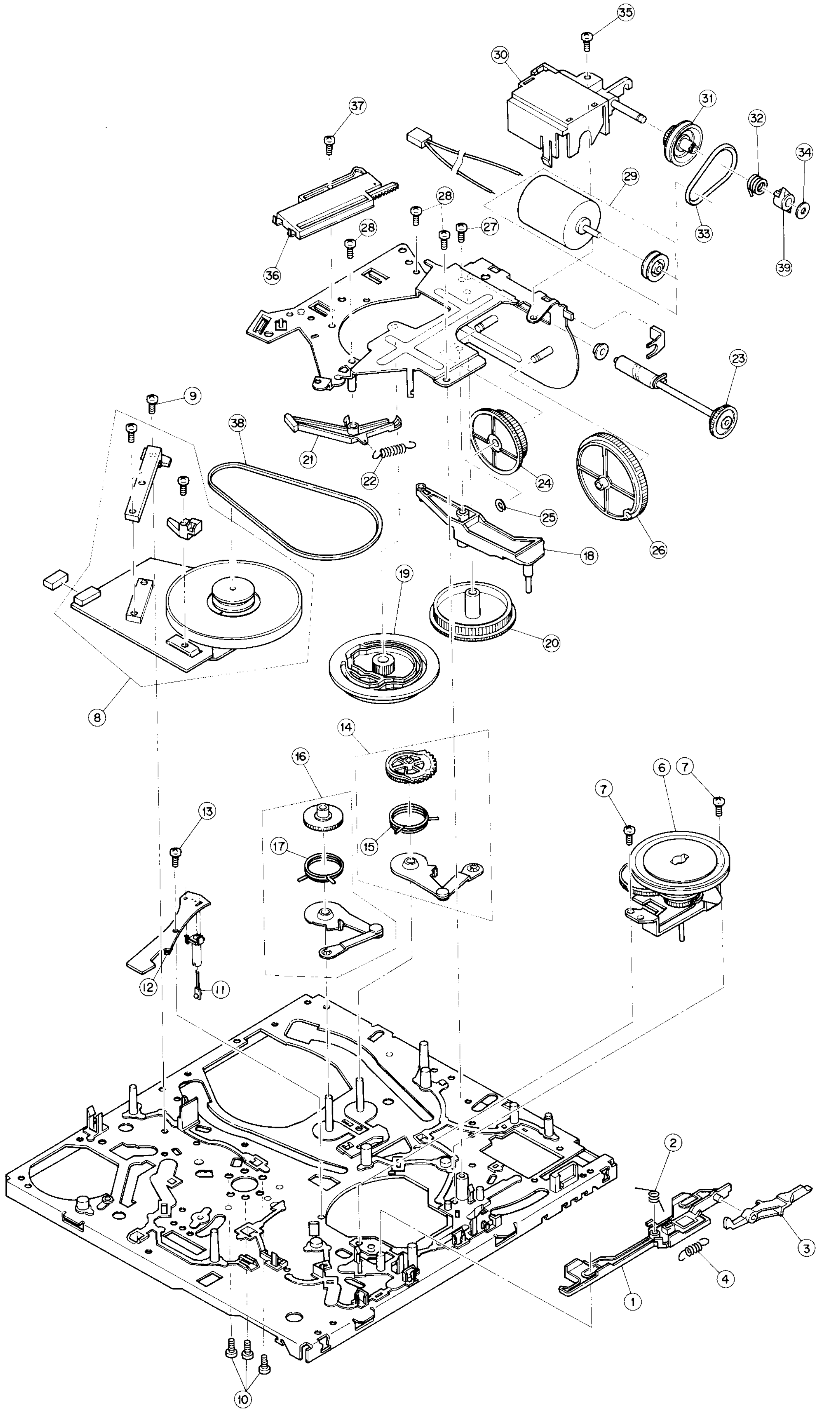
NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

4. MECHA BLOCK (2)

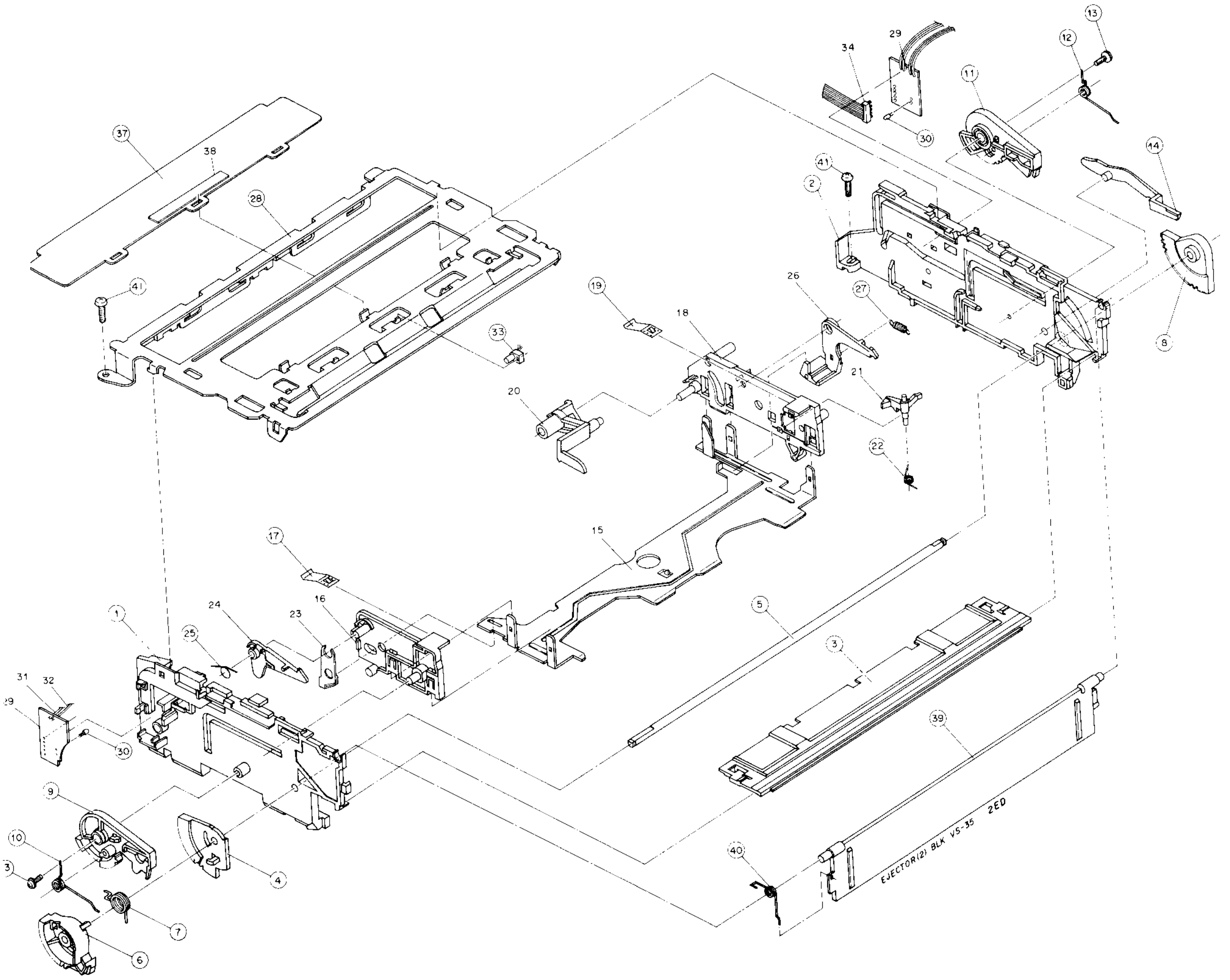
Ref. No.	Part No.	Description
1	ML-373038	SLIDER FR
2	ZG-373894J1	SP TORSION SLIDER
3	ML-373036	LEVER F/R HOOK
4	ZG-373536	SP PULL HOOK
6	ML-373043	CLUTCH BLK
7	ZS-373895	DT BID26X08STL CMT
8	BM-373098	MOTOR DVX-67A2R2 [CAPSTAN MOTOR]
9	ZS-373895	DT BID26X08STL CMT
10	ZS-419782	BID26X05STL CMT
11	ED-373101	D LED LN59AK INFRARED [SENSOR PCB D1]
12	ET-361463	DETECTOR ON2170 Q,R [SENSOR PCB PH1]
13	ZS-369900	PAN30X08STL CMT TW
14	MZ-V1075A090A	GEAR TOGGLE (S) BLK VS-35EA
15	ZG-373542	SP TORSION GEAR TOGGLE(S)
16	MZ-V1075A100A	GEAR TOGGLE (TU) BLK VS-35EA
17	ZG-373541	SP TORSION GEAR TOGGLE(TU)
18	ML-367625	LEVER CAM SLIDER PART
19	MZ-500717T	GEAR CAM CENTER
20	MZ-500707T1	GEAR CAM TENSION
21	BL-367627	ARM FW BRAKE PART
22	ZG-373546	SP PULL FW BRAKE
23	MZ-367628J1	GEAR WORM PART
24	MZ-500716T	GEAR WHEEL
25	ZW-373898	SLIT W31X070X050PSL
26	MZ-500715T	GEAR FL DRIVE
27	ZS-373895	DT BID26X08STL CMT
28	ZS-373897	PLX BID26X10STL CMT
29	BM-367631	MOTOR PART [LOADING MOTOR][M901]
30	SP-500887T-A	HOUSING MOTOR PART
31	MR-373045	PULLY BELT LOADING
32	ZG-373046J1	SP TORSION TRIGGER
33	MB-373096	BELT LOADING
34	ZW-373901	SLIT W22X060X050PSL
35	ZS-373897	PLX BID26X10STL CMT
36	ES-381310J1	SW MODE SELECTOR D2ZQ-S2-2 [MODE SELECTOR]
37	ZS-373895	DT BID26X08STL CMT
38	MB-373080	BELT IDLER
39	MZ-376267	RING TRIGGER(2)

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHA BLOCK (2)



EJECTOR BLOCK



5. EJECTOR BLOCK

Ref. No.	Part No.	Description
1	MZ-368790T1	HOUSING(S)
2	MZ-368791T2	HOUSING(T)
3	SZ-375956T	GUID F
4	MZ-368794T	GEAR(S)
5	MS-368798T	SHAFT LOADING
6	MZ-368797T	GEAR CAM JOINT
7	ZG-375953T	SP TORSION JOINT
8	MZ-368795T1	GEAR(T)
9	ML-368792T	ARM LOADING(S)
10	ZG-375954T	SP TORSION LOADING(S)
11	ML-368793T	ARM LOADING(T)
12	ZG-375955T	SP TORSION LOADING(T)
13	ZS-368524	PLX BID26X10STL CMT C072
14	ML-500730T	ARM LID OPENER
17	ZG-382450T	SP PLATE HOLDER(2)
19	ZG-382450T	SP PLATE HOLDER(2)
22	ZG-375959T	SP TORSION RELEASE
25	ZG-375957T1	SP TORSION DAMPER
27	ZG-375958T	SP PULL DAMPER
28	MA-368799T	CHASSIS UPPER
30	ET-361490	TR PHOTO PN268 R,S
39A	SE-388033J	MASK CASSETTE E11 [EA,ES]
39C	SE-388035J	MASK CASSETTE E12 [EV,EO-E,EO-B]
40	ZG-500767	SP TORSION MASK
41	ZS-378341	PLX BID30X12STL CMT
42	BV-V1075A240A	TW HOLDER CASSETTE BLK -35EA/TW
43	BV-V1075A205C	TW EJECTOR (2) BLK 9272/TW

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

6. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1A	BA-V1084A605A	PC(#) MAIN(PAL) BLK VS-26EA [EA]
1B	BA-V1084A605C	PC(#) MAIN(PAL) BLK VS-26ES [ES]
1C	BA-V1084A605D	PC(#) MAIN(PAL) BLK VS-26EV [EV-E,EV-Y1]
1D	BA-V1084A605E	PC(#) MAIN(PAL) BLK (VS-26EO) [EO-E]
1E	BA-V1084A605L	PC(#) MAIN(PAL) BLK VS-27EV [EV-E,EV-Y7]
1G	BA-V1084A605F	PC(#) MAIN(PAL) BLK (VS-20EO(V)) [EO-V]
2A	BA-V1084A500A	PC(#)POWER BLK VS-22EA [EA]
2C	BA-V1084A500E	PC(#)POWER BLK VS-22ES [ES]
2D	BA-V1084A500C	PC(#)POWER BLK VS-22EV(E) [EV-E]
2E	BA-V1084A500D	PC(#)POWER BLK VS-22EV(Y1) [EV-Y1]
2F	BA-V1075D500H	PC(#)POWER BLK VS-37EM [EV-E,EV-Y7]
2G	BA-V1084A500F	PC(#)POWER BLK VS-22EO(E) [EO-E]
2H	BA-V1084A500G	PC(#)POWER BLK VS-22EO(V) [EO-V]

PC (#) MAIN BLK CONSISTS OF FOLLOWING P.C BOARD.

- * MAIN P.C BOARD
- * CHROMA P.C BOARD
- * AUDIO & PRE-AMP P.C BOARD
- * OPERATION P.C BOARD
- * PRE-SET P.C BOARD
- * 21 PIN P.C BOARD (EO ONLY)

PC (#) POWER BLK CONSISTS OF FOLLOWING P.C BOARD.

- * POWER SUPPLY P.C BOARD
- * TR (1) P.C BOARD
- * TR (2) P.C BOARD
- * TR P.C BOARD (VS-27EV ONLY)
- * SW POWER P.C BOARD (VS-27EV ONLY)
- * DIODE P.C BOARD (VS-27EV ONLY)

7. MAIN P.C BOARD

Ref. No.	Part No.	Description
C13	EC-355728	C COMP V AWS 222J 50DC
C500A	EC-368823	C DBL LAYER EECS5R5H 473Z5.5DC [EA,EO-E,EO-V]
C500B	EC-368118	C DBL LAYER EECS5R5H 224 5.5DC [ES,EV]
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D6	ED-346546	D ZENER H HZ9C3L [EO-E,EO-V]
D200	ED-307572	D SILICON H 1SS131
D201	ED-624903	D SILICON H 1S2473
D202	ED-307572	D SILICON H 1SS131
D204	ED-307572	D SILICON H 1SS131
D500	ED-307572	D SILICON H 1SS131
D501	ED-307572	D SILICON H 1SS131
D502	ED-307572	D SILICON H 1SS131
D503	ED-307572	D SILICON H 1SS131
D504	ED-307572	D SILICON H 1SS131
D506	ED-307572	D SILICON H 1SS131
D507	ED-307572	D SILICON H 1SS131
D508	ED-307572	D SILICON H 1SS131
D509	ED-307572	D SILICON H 1SS131
D510	ED-307572	D SILICON H 1SS131
D511	ED-307572	D SILICON H 1SS131
D512	ED-307572	D SILICON H 1SS131
D516	ED-346541	D ZENER H HZ9B2L
D528	ED-307572	D SILICON H 1SS131
D529	ED-365699	D ZENER H HZS5.6B1J F05
D530	ED-307572	D SILICON H 1SS131
FL1A	EH-373916	FILTER CE SAF36.9MZ70Z [EA]
FL1B	EH-376120	FILTER CE SAF38.9MW70Z [ES]
FL1C	EH-373914	FILTER CE SAF38.9MZ70Z [EV,EO-E]
FL1D	EH-376119	FILTER CE SAF38.9MZH71Z [EO-V]
FL2A	EH-373918	FILTER CE TPS5.5MB [EA,EV,EO-E]
FL2B	EH-373919	FILTER CE TPS6.0MB [ES]
FL2C	EH-368948	FILTER CE TPS5.5MW [EO-V]
FL3A	EH-373920	FILTER CE SFE5.5MB [EA,EV,EO-E]
FL3B	EH-373921	FILTER CE SFE6.0MB [ES]
FL4A	EH-379367	FILTER CE CDA5.5ME23A [EA,EV,EO-E,EO-V]
FL4B	EH-379368	FILTER CE CDA6.0ME23A [ES]
FL5	EH-368136	FILTER LC TPS 134-5052-04 [EO-V]
FL200	EH-373144	FILTER LC LP LF-69P-02 5P
FL201	EH-360339	FILTER LC AP AF-25P [EA,EV,EO-E,EO-V]
FL202	EH-368821	FILTER LC LP MYV-23R
FR500	ER-336756	R OMF H FS 1W R47J
IB500	EH-378540J	COMP R RGLE5X 103J
IB501	EH-386636J	COMP R RGLE6X 103J
IC1	EI-368809	IC M51496P
IC2	EI-330986	IC TA78L009AP [EO-E,EO-V]
IC3	EI-337530	IC UPC574J
IC200	EI-380085J	IC AN3231K
IC201	EI-200573	IC TC4053BP
IC202	EI-373966	IC MSM6965-3RS
IC500	EI-360316	IC BA6305

Ref. No.	Part No.	Description
IC501	EI-373980	IC BA15218N
IC502	EI-354095	IC BA718
IC503	EI-380086J	IC BU2735AS
IC504	EI-353421	IC BA6229
IC505	EI-373981J1	IC BA10393N
IC506	EI-378177	IC MB88525-192G LCXSYP3
IC507	EI-373980	IC BA15218N
L1A	EO-368179	COIL FIX 1 EL0606SKI R68M [ES,EO-E]
L1B	EO-368178	COIL FIX 1 EL0606SKI R47M [EO-V]
L2	EO-345860	COIL FIX 1 EL0606SKI 2R7K
L4A	EO-368852	COIL VARI 1 134-5055-04 [EA]
L4B	EO-368810	COIL VARI 1 134-5054-04 [EXCEPT EA]
L5A	EO-368855	COIL TUN 1 LLD 134-5040-04 [EA]
L5B	EO-368812	COIL TUN 1 LLD 134-5038-04 [EA,EV,EO-E,EO-V]
L6A	EO-345876	COIL FIX 1 EL0606SKI 470J [EA,EV,EO-E,EO-V]
L6B	EO-345874	COIL FIX 1 EL0606SKI 330J [ES]
L8	EO-345869	COIL FIX 1 EL0606SKI 150J
L9A	EO-368857	COIL TUN 2 AFT 111-5043-14 [EA]
L9B	EO-368814	COIL TUN 2 AFT 111-5041-14 [ES,EV,EO-E,EO-V]
L10A	EO-376601	COIL FIX 1 LF-5.0S F05 120K [EA]
L10B	EO-376599	COIL FIX 1 LF-5.0S F05 100K [ES,EV,EO-E,EO-V]
L13A	EO-376606	COIL FIX 1 LF-5.0S F05 180K [EA,EV,EO-E,EO-V]
L13B	EO-376603	COIL FIX 1 LF-5.0S F05 150K [ES]
L14	EO-380093J1	COIL FIX 2 C-5294-01 101K
L200	EO-376858	COIL FIX 1 LF-5.0S F05 560K
L201	EO-376602	COIL FIX 1 LF-5.0S F05 121K
L202	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L203	EO-376609	COIL FIX 1 LF-5.0S F05 270K
L204	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L206	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L207	EO-345887	COIL FIX 1 EL0606SKI 221J
L208	EO-376612	COIL FIX 1 LF-5.0S F05 680K
L209	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L212	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L213	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L303	EO-376610	COIL FIX 1 LF-5.0S F05 330K
L500	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L550	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
P200	EJ-373971	PIN J JPJ0811-010 BLACK 2P [EA,ES,EV]
P201	EJ-373970	PIN J JPJ0811-040 YELLOW 2P [EA,ES,EV]
SW200A	ES-373973	SW SLIDE HSW0810-010 1-01-02S [EA,ES] [AUTO-B/W]
SW200B	ES-373974	SW SLIDE HSW0811-020 2-02-03S [EV,EO-E,EO-V][P-B/W-S]
TR1	ET-375777	TR 2SC2926S P,Q
TR2	ET-360137	TR 2SC3330 U,V F05
TR3	ET-360137	TR 2SC3330 U,V F05
TR4	ET-360137	TR 2SC3330 U,V F05
TR5	ET-375777	TR 2SC2926S P,Q
TR6	ET-360137	TR 2SC3330 U,V F05
TR7	ET-360137	TR 2SC3330 U,V F05
TR8	ET-354414	TR DTC144ES
TR9	ET-353899	TR 2SA1317 S,T,U
TR10	ET-321644	TR 2SC1213 C
TR11	ET-353899	TR 2SA1317 S,T,U
TR13	ET-356224	TR 2SA1286 G,H,J F05
TR14	ET-360646	TR DTA143ES [EO-E,EO-V]
TR15	ET-355669	TR 2SC3246 G,H,J F05 [EO-E,EO-V]
TR16	ET-353899	TR 2SA1317 S,T,U
TR17	ET-353899	TR 2SA1317 S,T,U
TR18	ET-353899	TR 2SA1317 S,T,U
TR19A	ET-336845	TR 2SB641 Q,R,S,T [EV]
TR19B	ET-356224	TR 2SA1286 G,H,J F05 [EA,ES,EO-E,EO-V]
TR200	ET-353899	TR 2SA1317 S,T,U
TR201	ET-360137	TR 2SC3330 U,V F05
TR204	ET-353899	TR 2SA1317 S,T,U
TR206	ET-360137	TR 2SC3330 U,V F05
TR208	ET-360137	TR 2SC3330 U,V F05
TR210	ET-356224	TR 2SA1286 G,H,J F05
TR211	ET-360137	TR 2SC3330 U,V F05
TR212	ET-353899	TR 2SA1317 S,T,U
TR213	ET-360137	TR 2SC3330 U,V F05
TR215	ET-353899	TR 2SA1317 S,T,U
TR500	ET-354415	TR DTA144ES
TR501	ET-360137	TR 2SC3330 U,V F05
TR502	ET-373985	TR DTA144TS
TR503	ET-354414	TR DTC144ES
TR504	ET-354414	TR DTC144ES
TR505	ET-354414	TR DTC144ES
TR507	ET-373985	TR DTA144TS
TR508	ET-354371	TR DTC124ES
TR512	ET-373985	TR DTA144TS
TR513	ET-360137	TR 2SC3330 U,V F05
TR514	ET-373985	TR DTA144TS
TR515	ET-353899	TR 2SA1317 S,T,U
TR516	ET-353899	TR 2SA1317 S,T,U
TR517	ET-354365	TR DTC114YS
TR518	ET-354371	TR DTC124ES
TR520	ET-354414	TR DTC144ES
TR521	ET-353899	TR 2SA1317 S,T,U
VR1	EV-368135	R S-FIX H KVSF637A 0.01W 474
VR2	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR3	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR200	EV-358829	R S-FIX H RH0615C 0.10W 223
VR201	EV-358829	R S-FIX H RH0615C 0.10W 223
VR202	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR203	EV-356324	R S-FIX H KVSF637A 0.10W 103
VR204	EV-358829	R S-FIX H RH0615C 0.10W 223
VR205	EV-358829	R S-FIX H RH0615C 0.10W 223
VR206	EV-356579	R S-FIX H RH0615C 0.10W 102
VR207	EV-356679	R S-FIX H RH0615C 0.10W 682
VR208	EV-356583	R S-FIX H RH0615C 0.10W 332
VR210	EV-374014	R S-FIX EVTK-8C 0.20W 104
VR501	EV-356582	R S-FIX H RH0615C 0.10W 473
X500	EI-347991	OSC CE CSA6.00MS 6MHZ
1A	EE-373927	TV TUNER TEMS1-005A EA [EA]
1B	EE-373932	TV TUNER TEMZ1-011A [ES]
1C	EE-380256J	TV TUNER TEMD1-022A EM [EV]
1E	EE-385892J	TV TUNER TERE1-001A EO [EO-E,EO-V]
2A	BV-373935	RF CONVERTER MDLK2S100A EA [EA]
2B	BV-373936	RF CONVERTER MDLK3B063A EK,ES [ES]
2C	BV-373939	RF CONVERTER MDLK2D103A EV [EV]
2D	BV-373938	RF CONVERTER MDLK-3D063A EO [EO-E,EO-V]
3A	SP-500947T	PANEL REAR JACK EA [EA]

Ref. No.	Part No.	Description
3B	SP-500928T	PANEL REAR JACK EK [ES]
3C	SP-380083T	PANEL REAR JACK EV(Y1) [EV]
4	ZS-362378	PLX BID30X10STL CMT

8. CHROMA P.C BOARD

Ref. No.	Part No.	Description
D400	ED-307572	D SILICON H 1SS131
D401	ED-307572	D SILICON H 1SS131
DL400	EH-371021	DL EFD-HR124A13J
FL400	EH-364045	FILTER LC FF-78P
IC400	EI-373023	IC TA8632N
IC401	EI-379020	IC M50455-073SP
L400	EO-376603	COIL FIX 1 LF-5.0S F05 150K
L401	EO-376610	COIL FIX 1 LF-5.0S F05 330K
L402	EO-376599	COIL FIX 1 LF-5.0S F05 100K
L403	EO-376606	COIL FIX 1 LF-5.0S F05 180K
L404	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L405	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L406	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L407	EO-376601	COIL FIX 1 LF-5.0S F05 120K [EV,EO-E,EO-V]
L408	EO-345893	COIL FIX 1 EL0606SKI 471J
L409	EO-345889	COIL FIX 1 EL0606SKI 331J
L410	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L411	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
TR400	ET-360137	TR 2SC3330 U,V F05
TR401	ET-360137	TR 2SC3330 U,V F05
TR402	ET-353899	TR 2SA1317 S,T,U
TR403	ET-360137	TR 2SC3330 U,V F05
TR404	ET-368084	TR 2SC3315 D
TR405	ET-360137	TR 2SC3330 U,V F05
TR406	ET-360137	TR 2SC3330 U,V F05
TR407	ET-360137	TR 2SC3330 U,V F05
TR408	ET-353897	TR DTC114ES [EV,EO-E,EO-V]
TR409	ET-353899	TR 2SA1317 S,T,U
TR410	ET-360137	TR 2SC3330 U,V F05
VR400	EV-368340	R S-FIX H KVSF687A 0.30W 104
VR401	EV-381171J	R S-FIX V RH0614C 0.10W 332
X400	EI-309878	OSC X'TAL 4.433619MHZ

9. AUDIO & PRE-AMP P.C BOARD

Ref. No.	Part No.	Description
D700	ED-307572	D SILICON H 1SS131
D701	ED-307572	D SILICON H 1SS131
FL700	EO-375471	COIL OSC 1 S033344
IC700	EI-373946	IC LA7292
IC800	EI-380084J	IC UPC2313CA
L700	EO-382618J	COIL FIX 1 FL07H 272K
L701	EO-382619J	COIL FIX 1 EL0607SKI F05 472J
L802	EO-376610	COIL FIX 1 LF-5.0S F05 330K
L804	EO-376606	COIL FIX 1 LF-5.0S F05 180K
L805	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
L806	EO-376612	COIL FIX 1 LF-5.0S F05 680K
L807	EO-345883	COIL FIX 1 EL0606SKI 151J
L808	EO-376179	COIL FIX 1 ALF-7.5F F05 101K
P800	EJ-373949	SOCKET 5597-08CPB 8P
TR700	ET-360137	TR 2SC3330 U,V F05
TR801	ET-360137	TR 2SC3330 U,V F05
TR802	ET-360137	TR 2SC3330 U,V F05
TR803	ET-356224	TR 2SA1286 G,H,J F05
VR700	EV-356577	R S-FIX H RH0615C 0.10W 103
VR701	EV-356582	R S-FIX H RH0615C 0.10W 473

10. OPERATION P.C BOARD

Ref. No.	Part No.	Description
D900	ED-307572	D SILICON H 1SS131
D901	ED-307572	D SILICON H 1SS131
D902	ED-307572	D SILICON H 1SS131
D903	ED-307572	D SILICON H 1SS131
D904	ED-307572	D SILICON H 1SS131
D905	ED-307572	D SILICON H 1SS131
D906	ED-307572	D SILICON H 1SS131
D907	ED-307572	D SILICON H 1SS131
D908	ED-307572	D SILICON H 1SS131 [EO-V]
D909	ED-307572	D SILICON H 1SS131 [EXCEPT ES]
D912	ED-307572	D SILICON H 1SS131
D913	ED-307572	D SILICON H 1SS131
D915	ED-307572	D SILICON H 1SS131
D916	ED-346543	D ZENER H HZ9C1L
D917	ED-383034J	D LED SLR-54PC3F L,M GREEN [QUICK START]
D918	ED-383034J	D LED SLR-54PC3F L,M GREEN [QUICK START]
D919	ED-351419	D ZENER H HZ7B3L
D920	ED-360409	D PHOTO PN323B
D921	ED-307572	D SILICON H 1SS131
FL900	EM-373956	IND FL FV132 DOUBLE
IB900	EH-378541J	COMP R RGLE3X 473J
IB901	EH-383057J	COMP R RGLE5X 473J
IC901A	EI-380580J	IC UPD75208CW-175 LLXOPE1 [EXCEPT EO-V]
IC901B	EI-375472	IC UPD75208CW-105 LCXOPE3 [EO-V]
IC902	EI-373955	IC S8053ALR
IC903	EI-373954	IC CXK1006L
IC904	EI-367271	IC UPC1490HA
L900	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L901	EO-376616	COIL FIX 1 LF-5.0S F05 221K
SW900	ES-349474	SW TACT SKHHAM004A [TRAKING >]
SW901	ES-349474	SW TACT SKHHAM004A [TRAKING <]
SW902	ES-349474	SW TACT SKHHAM004A [QUICK TIMER STOP]
SW903	ES-349474	SW TACT SKHHAM004A [QUICK TIMER-M]
SW904	ES-349474	SW TACT SKHHAM004A [REC]
SW905	ES-349474	SW TACT SKHHAM004A [STILL]
SW906	ES-349474	SW TACT SKHHAM004A [REW]
SW907	ES-349474	SW TACT SKHHAM004A [CH UP]
SW908	ES-349474	SW TACT SKHHAM004A [TIMER]
SW909	ES-349474	SW TACT SKHHAM004A [STOP]
SW910	ES-349474	SW TACT SKHHAM004A [FF]
SW911	ES-349474	SW TACT SKHHAM004A [POWER]
SW912	ES-349474	SW TACT SKHHAM004A [QUICK TIMER-H]
SW913	ES-349474	SW TACT SKHHAM004A [CH DOWN]
SW914	ES-349474	SW TACT SKHHAM004A [PLAY]
SW915	ES-349474	SW TACT SKHHAM004A [SLOW]
SW916	ES-349474	SW TACT SKHHAM004A [EJECT]
SW918	ES-380116J	SW SLIDE ESD-1112252 2-02-02N [IN PUT SELECT]
SW919	ES-380116J	SW SLIDE ESD-1112252 2-02-02N [EDIT]
TR900	ET-354414	TR DTC144ES

Ref. No.	Part No.	Description
TR901	ET-354414	TR DTC144ES
TR902	ET-354414	TR DTC144ES [EXCEPT ES]
TR903	ET-354414	TR DTC144ES
TR904	ET-368836	TR DTA143TA
TR906	ET-354414	TR DTC144ES
TR907	ET-354364	TR DTC143TS
TR908	ET-354364	TR DTC143TS
TR909	ET-354364	TR DTC143TS
VR900	EV-380314J	VR ROTARY RK09K1130 L=** B203 [PICTURE]
X900	EI-388110J	OSC CE CST4.19MG 4.194MHZ
X901	EI-368825	OSC X'TAL MX-38T 32.768KHZ

11. PRE-SET P.C BOARD

Ref. No.	Part No.	Description
D950	ED-382358J	D LED SLR34PC 3F K,L,M GREEN [AFC/MEMO]
D951	ED-307572	D SILICON H 1SS131
D952	ED-307572	D SILICON H 1SS131
D953	ED-307572	D SILICON H 1SS131
D954	ED-307572	D SILICON H 1SS131
D955	ED-307572	D SILICON H 1SS131
SW951	ES-349474	SW TACT SKHHAM004A [FAST X]
SW952	ES-349474	SW TACT SKHHAM004A [FAST +]
SW953	ES-349474	SW TACT SKHHAM004A [BAND]
SW954	ES-349474	SW TACT SKHHAM004A [SLOW X]
SW955	ES-349474	SW TACT SKHHAM004A [SLOW +]
SW956	ES-349474	SW TACT SKHHAM004A [MEMO]
SW957	ES-380117J	SW SLIDE ESD-1111352 2-01-03N [PRESET]

12. 21 PIN P.C BOARD (EO ONLY)

Ref. No.	Part No.	Description
P6	EJ-372242	SOCKET HXC 1521-01-010 21P
1B	SP-501728T	PANEL REAR JACK EOH [EO-V,EO-E]
2	ZS-362378	PLX BID30X10STL CMT

13. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
C1	*EC-355371	C CE V DNS472ZV V 472Z 400AC
C2	EC-363491	C EC V CUT SME 222M 25.0DC
C3A	EC-365360	C EC V CUT SME 471M 25.0DC [EXCEPT ES]
C3B	EC-366613	C EC V CUT SME 102M 25.0DC [ES]
D1	*ED-370990	D SILICON 1SR35-100AHS F10
D2	*ED-370990	D SILICON 1SR35-100AHS F10
D3	*ED-370990	D SILICON 1SR35-100AHS F10
D4	*ED-370990	D SILICON 1SR35-100AHS F10
D5	*ED-370990	D SILICON 1SR35-100AHS F10 [EO-E,EO-V]
D6	*ED-370990	D SILICON 1SR35-100AHS F10 [EO-E,EO-V]
D7	*ED-370990	D SILICON 1SR35-100AHS F10 [EO-E,EO-V]
D8	*ED-370990	D SILICON 1SR35-100AHS F10 [EO-E,EO-V]
D9	ED-380089J	D SILICON DFC15TC-FD1 200/1.5A
D10	ED-307572	D SILICON H 1SS131
D11	ED-624903	D SILICON H 1S2473
D12	ED-307572	D SILICON H 1SS131
D13	ED-307572	D SILICON H 1SS131
D14	ED-307572	D SILICON H 1SS131
D15	ED-307572	D SILICON H 1SS131
D16	ED-307572	D SILICON H 1SS131
D17	ED-307572	D SILICON H 1SS131
D18	ED-624903	D SILICON H 1S2473
D19	ED-346586	D ZENER H HZ33-3L
D20	ED-346594	D ZENER H HZ3 B3
D21	ED-371512	D SILICON ERA22-04Y F05 400/.5
D23	ED-307572	D SILICON H 1SS131
FL1	*EO-368465	COIL LF LF4N [EO-V]
FR1	*ER-378650J	R FUSE H S10 ERQ16NK 1/6W R47J [EO-V,EO-E]
FR2	*ER-378650J	R FUSE H S10 ERQ16NK 1/6W R47J
IC1	EI-380090J	IC NJM2352D
IC2	EI-367572	IC BA15218
L3	EO-380093J1	COIL FIX 2 C-5294-01 101K
L4	EO-382264T	COIL FIX 2 EF1950 560K
L5	EO-382264T	COIL FIX 2 EF1950 560K
L6A	EO-382722J	COIL FIX 1 RCH855 F05 560K [EA,EV-E,EV-Y1,ES]
L6B	EO-380093J1	COIL FIX 2 C-5294-01 101K [EO-E,EO-V]
L7	EO-382264T	COIL FIX 2 EF1950 560K
L8	EO-349560	COIL FIX 1 FL09H 122J
TR1	*ET-366365	TR 2SB1185 E,F
TR3	ET-372197	TR 2SC3377 R
TR4	ET-360137	TR 2SC3330 U,V F05
TR6	ET-360137	TR 2SC3330 U,V F05
TR7A	*ET-356224	TR 2SA1286 G,H,J F05 [EXCEPT EO-V]
TR7B	*ET-356817	TR 2SB891 Q,R [EO-V]
TR8	ET-356336	TR DTA114ES
TR9	ET-354364	TR DTC143TS
TR10	ET-354364	TR DTC143TS
TR11A	*ET-380630J	TR 2SB1010 [EXCEPT EO-V]
TR11B	*ET-356817	TR 2SB891 Q,R [EO-V]
TR12	*ET-366168	TR 2SD1292 Q,R
TR13	ET-353899	TR 2SA1317 S,T,U
TR15	ET-380630J	TR 2SB1010
VR1	EV-356579	R S-FIX H RH0615C 0.10W 102
T1A	*BT-380094J	TRANS POW V1084EK [EA]
T1B	*BT-380095J	TRANS POW V1084EV [EV-E,EV-Y1]
T1C	*BT-380097J	TRANS POW V1084ES [ES]
T1D	*BT-380096J1	TRANS POW V1084EO [EO-E,EO-V]
F1A	*EF-601942	FUSE SEMKO T 250V 630MA
F2A	*EF-601301	FUSE SEMKO T 250V 2.00A

14. TR (1) P.C BOARD

Ref. No.	Part No.	Description
TR2	*ET-366581	TR 2SD1762 E,F

15. TR (2) P.C BOARD

Ref. No.	Part No.	Description
TR5	*ET-366581	TR 2SD1762 E,F

16. POWER SUPPLY P.C BOARD(VS-27EVONLY)

Ref. No.	Part No.	Description
C2	EC-363491	C EC V CUT SME 222M 25.0DC
C3	EC-365397	C EC V CUT SME 332M 10.0DC
C4	EC-367048	C EC V CUT SME 101M 63.0DC
C5	EC-363489	C EC V CUT SME 221M 63.0DC
C8	EC-363491	C EC V CUT SME 222M 25.0DC
D3	∗ED-367202	D SILICON S5566B F12
D4	∗ED-367202	D SILICON S5566B F12
D5	ED-307572	D SILICON H 1SS131
D7	∗ED-367693	D SILICON S5566G(LC-7)F12
D8	ED-367693	D SILICON S5566G(LC-7)F12
D9	ED-307572	D SILICON H 1SS131
D10	ED-307572	D SILICON H 1SS131
D11	ED-376598	D ZENER H HZS36B3J F05
D12	ED-346525	D ZENER H HZ6A3L
D13	∗ED-380715J	D SILICON ERB83-004 40/1.7A
D14	ED-307572	D SILICON H 1SS131
FR1	∗ER-318400	R CB H S10 FS RDS 1/4W 680J
IC1	∗EI-367572	IC BA15218
TH1	EX-330533	POSISTOR PTH61G27BD3R3N
TR1	∗ET-353899	TR 2SA1317 S,T,U
TR2	∗ET-355669	TR 2SC3246 G,H,J F05
TR3	∗ET-373025	TR 2SD1944 J1,J2,K
TR4	∗ET-373025	TR 2SD1944 J1,J2,K
TR5	∗ET-360137	TR 2SC3330 U,V F05
TR6	∗ET-360137	TR 2SC3330 U,V F05
TR7	ET-360137	TR 2SC3330 U,V F05
TR9	∗ET-376818	TR 2SC3247 H,J,K
TR10	∗ET-380685J	TR 2SD1761 E,F,G
TR11	∗ET-364093	TR 2SA1283 E,F
VR1	EV-356576	R S-FIX H RH0615C 0.10W 472
T1	∗BT-373992	TRANS POW V1075EM
F2	∗EF-601301	FUSE SEMKO T 250V 2.00A

17. TR P.C BOARD

Ref. No.	Part No.	Description
TR8	∗ET-366677	TR 2SD1761 E,F

18. SW POWER P.C BOARD .Y)

Ref. No.	Part No.	Description
C1	∗EC-355371	C CE V DNS472ZV V 472Z 400AC
C25	∗EC-378327	C EC V SM 2R2M 450DC
D15	∗ED-371512	D SILICON ERA22-04Y F05 400/.5
D16	∗ED-371512	D SILICON ERA22-04Y F05 400/.5
D18	ED-307572	D SILICON H 1SS131
D19	ED-346526	D ZENER H HZ6B1L
D20	ED-371512	D SILICON ERA22-04Y F05 400/.5
D21	∗ED-378455	D SILICON DSA12TG 600/1.2A
D22	ED-346526	D ZENER H HZ6B1L
D23	ED-307572	D SILICON H 1SS131
IC2	∗EI-376794J1	IC BA10393
IC3	∗EI-368152	IC BA707
RL1	∗EQ-376837	RELAY POW VB-100TBU-5 2TR 100V
R26	ER-376864	R OMF H S12 SPR1 1W 274J
TR13	∗ET-376663	TR 2SC3868
TR14	∗ET-376663	TR 2SC3868
TR15	ET-360137	TR 2SC3330 U,V F05
F1	∗EF-258344	FUSE SEMKO T 250V 800MA

19. DIODE P.C BOARD

Ref. No.	Part N .	Description
D1	∗ED-379298	D SILICON DBA20B 100/2.0A

20. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1A	BD-V1084D307A	PANEL FRONT BLK VS-26EA-B [EA]
1C	BD-V1084B307C	PANEL FRONT BLK VS-26ES-B [ES]
1D	BD-V1084D307D	PANEL FRONT BLK VS-26EV-B [EV-E,EV-Y1]
1E	BD-V1084B307E	PANEL FRONT BLK (VS-20EO-B) [EO-V]
1F	BD-V1084D307F	PANEL FRONT BLK VS-27EV-B [EV-E,EV-Y7]
1G	BD-V1084B307G	PANEL FRONT BLK (VS-26EO-B) [EO-E]
2	SZ-375320J1	LATCH DOOR
3	SP-388597J	DOOR FRONT LL2 B
4A	ZZ-380982J	LABEL PRESET(L) OEM EO
5	ZS-362378	PLX BID30X10STL CMT
6	SA-353927B	F00T(2)
7	ZS-364545	DT BID30X08STL CMT
8	ZS-362378	PLX BID30X10STL CMT
9	ZS-368547	PLX BID30X06STL CMT
10	SP-500772	COVER UPPER B
11	ZS-374023	DT BID26X08STL BNI
12A	∗EW-380684J	AC CORD 200 0436 LCFL B115 A S [EA,EV-Y1]
12C	∗EW-371933	AC CORD200 KP419LTCE B100 A EV [EV-E,ES,EO-E,EO-V,EV-Y7
13	TC-376182	PAD COVER BOTTOM

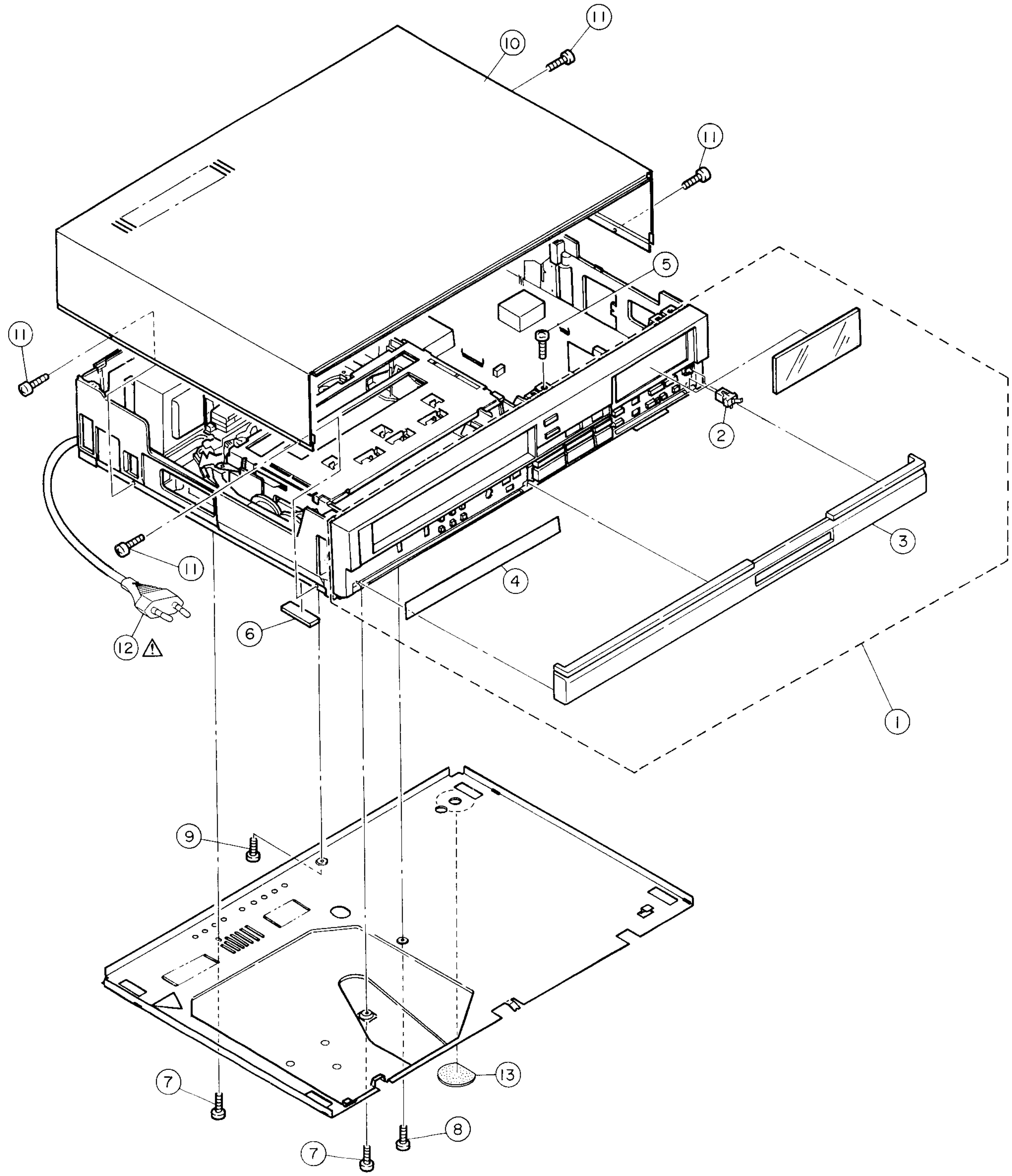
21. ACCESSORY

Ref. No.	Part No.	Description
1	EW-348414	CORD PAL
2A	AX-N4003B010A	LLX REMOCON BLK [EXCEPT ES]
2B	AX-N4003B010C	LLX REMOCON BLK [ES]
3	AX-359649	AC ADAPTOR S-I6115 [EV-Y7]

22. REMOTE CONTROL UNIT RC-V22

Ref. No.	Part No.	Description
D1	ED-376111	D LED SE303AC INFRARED
D2	ED-344280	D SILICON H GMA-01-FY2 F05
D3	ED-344280	D SILICON H GMA-01-FY2 F05
D4	ED-344280	D SILICON H GMA-01-FY2 F05
IC1	EI-376112	IC UPD6122G
X1	EI-376113	OSC CE CSB455EB
1	ZG-375530	TERMINAL BATTERY(A)
2	ZG-375531	TERMINAL BATTERY(B)
3	ZG-375532	TERMINAL BATTERY(C)
4	SC-375525A	COVER BATTERY(B)
5	SC-375526A	COVER PROGRAM A

FINAL ASSEMBLY BLOCK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ABBREVIATIONS (VIDEO)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A	Audio or Analogue	LM	Loading Motor
AC	Alternating Current	LM STP	Loading Motor SToP
ACC	Auto Color Control	LP	Long Play
A/C	Audio and Control	LPF	Low Pass Filter
ADJ	ADJust(ment)	ME-SECAM	Middle East SECAM
AFC	Auto Frequency Control	MI-COM	MIcro COMputer
AFT	Auto Fine Turning	MM	Mono-stayble Multi
AGC	Auto Gain Control	MOD	MODulator
AH(P)	Audio Head (Play Back)	MRS	Motor ReverSe
AH(R)	Audio Head (Record)	NG	Noise Gate
AL	ALl	NON-LIN	NON-LINear
AL	ALways	N.T.S.C.	National Television System Committee
ALC	Auto Level Control	O MUTE	Output MUTE
A-SW·P	Audio-SWitching · Pulse	OSC	OSCillator
A·MUTE	Audio MUTE	PAL	Phase Alternation Line
AUT/MAN	AUTO/MANual	PB	Play Back
ANT	ANTenna	P-COM	Phase-COMparator
APC	Automatic Phase Control	P DOWN	Power DOWN
ASSY	ASSemblY	PG	Pulse Generator
BAL	BALance	PL, PLG	PLunger (PLunGer)
B DOWN	Break DOWN	POS	POSition
BGP	Burst Gate Pulse	PRG	PRoGram
BLK	BLacK or BLocK	P & S	Power supply & System control
BM	Balanced Modulator	PU	Pick Up (head, pulse)
BPF	Band Pass Filter	PWR	PoWeR
BS	Band Select	Q	Quality factor
BU	Back Up	R	Right
B/W	Black and White	REC	RECord
C	Chroma	REF	REFerence
CCIR	Comité Consultatif International des	REF-V	REFerence Vertical signal
	Radio Communications	REG	REGulator
CH (Ch.)	CHannel (Channel) or CHroma	REV (REVW)	REView (REVieW)
CK	Color Killer	REW	REWind
CLK	CLocK	RF	Radio Frequency
CLP	CLiP	R·S SW	Record·Safety SWitch
CM	Capstan Motor	RST (RES)	ReSeT (RESet)
CN	CoNnector	RVS	ReVerSe
COMP	COMParator	S	Sensor, Shield
Comp	Comparison	SC	SimulCast
C or R	Cue or Review	S CLK	Serial CLocK
CR 1	Cue Review 1 (high)	SECAM	Séquentiel à Memoire
CSW	Cassette SWitch	SET (SEPA)	SEParator (SEPArator)
C SYNC	Composite SYNC	S & H	Sample and Hold
CTL	ConTroL	SLP	Super Long Play
CUE	CUE	SP	Standard Play
CW	Carrier Wave	SPD	SPeeD
DAC	Digital to Analog Converter	SRP	Supply Reel Pulse
DC	Direct Current	SRV	SeRVo
DEMOD	DEMODulator	SOW	Sync On Word
DET	DETect (DETector)	STBY	STandBY
DL	Delay Line	SW	SWitch
DM	Drum Motor	SW'NG	SWitchiNG
DOC	Drop Out Compensator	SWP	SWitching Pulse
D·P·E	Drum·Phase·Error	SYNC	SYNChronize
D·PG	Drum·Pulse Generator	T-AUDIO	Tuner AUDIO
EE	Electronic to Electronic	TA-MUTE	Tuner Audio MUTE
EF	Emitter Follower	TPZ (TRAPE)	TraPeZoid (TRAPEzoid)
EMPHA	EMPHAsis	TRK	TRacKing
ENV	ENVelope	TRP	Take up Reel Pulse
EP	Extended Play	T/U	Take Up
EQ	EQualizer	TV	TeleVision
FE	Full track Erase	UHF	Ultra High Frequency
FF	Flip-Flop or Fast Foward	UNR	UNRegulated
FG	Frequency Generator	V	Vertical or Video
Fig.	Figure	VCO	Voltage Controlled Oscillator
FM	Frequency Modulation	VD	Vertical Drive
Fo	resonance Frequency	VF	Voltage for Fine tuning
FREQ	FREQuency	VHF	Very High Frequency
FSI	Field Start Inhibit	VHS	Video Home System
GND	GrouND	VID	VIDeo
H	Horizontal	VIDEO-J	VIDEO Judge
HP	Horizontal (sync) Pulse	VIF	Video Intermediate Frequency
HPF	High Pass Filter	VJ	Video Judge
IC	Integrated Circuit	VM	Voltage for Memory
ID	IDentification	VOB	Video On Blank
IDL	IDLe (Voltage)	VOW	Video On Word
INS	INSert	VP	Vertical (sync) Pulse
INV	INVerter	VT	Voltage for Tuning
L	Left	WHT	WHiTe
L·CTL	Lamp·ConTroL	2H	2 Hour (SP)
LED	Light Emitting Diode	4H	4 Hour (LP)
LIM	LIMitter	6H	6 Hour (SLP/EP)

AKAI

MODEL VS-26 EA/ES/EV /EO/(E/V)
MODEL VS-20EO, 27EV

SCHEMATIC DIAGRAMS AND PC BOARDS

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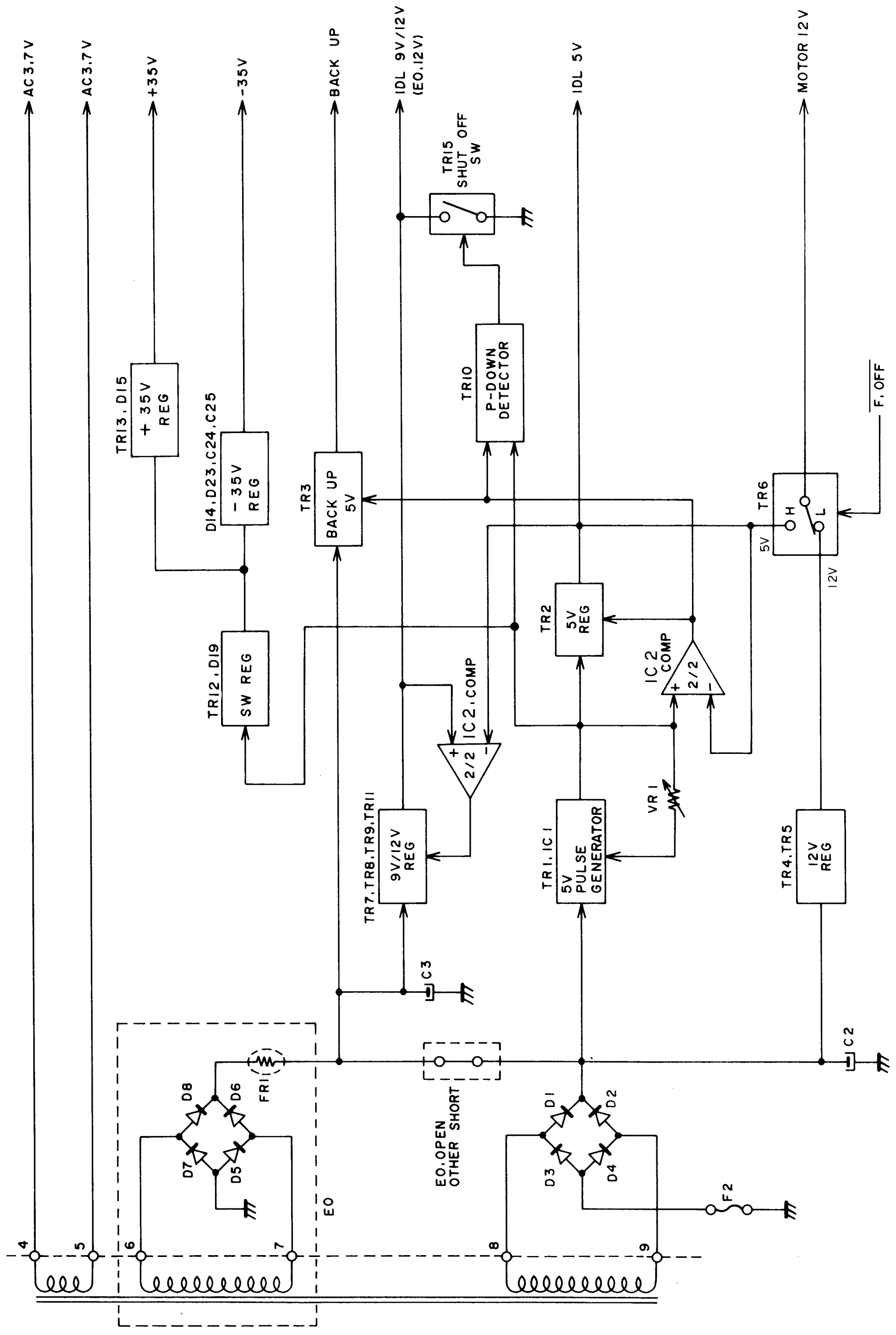
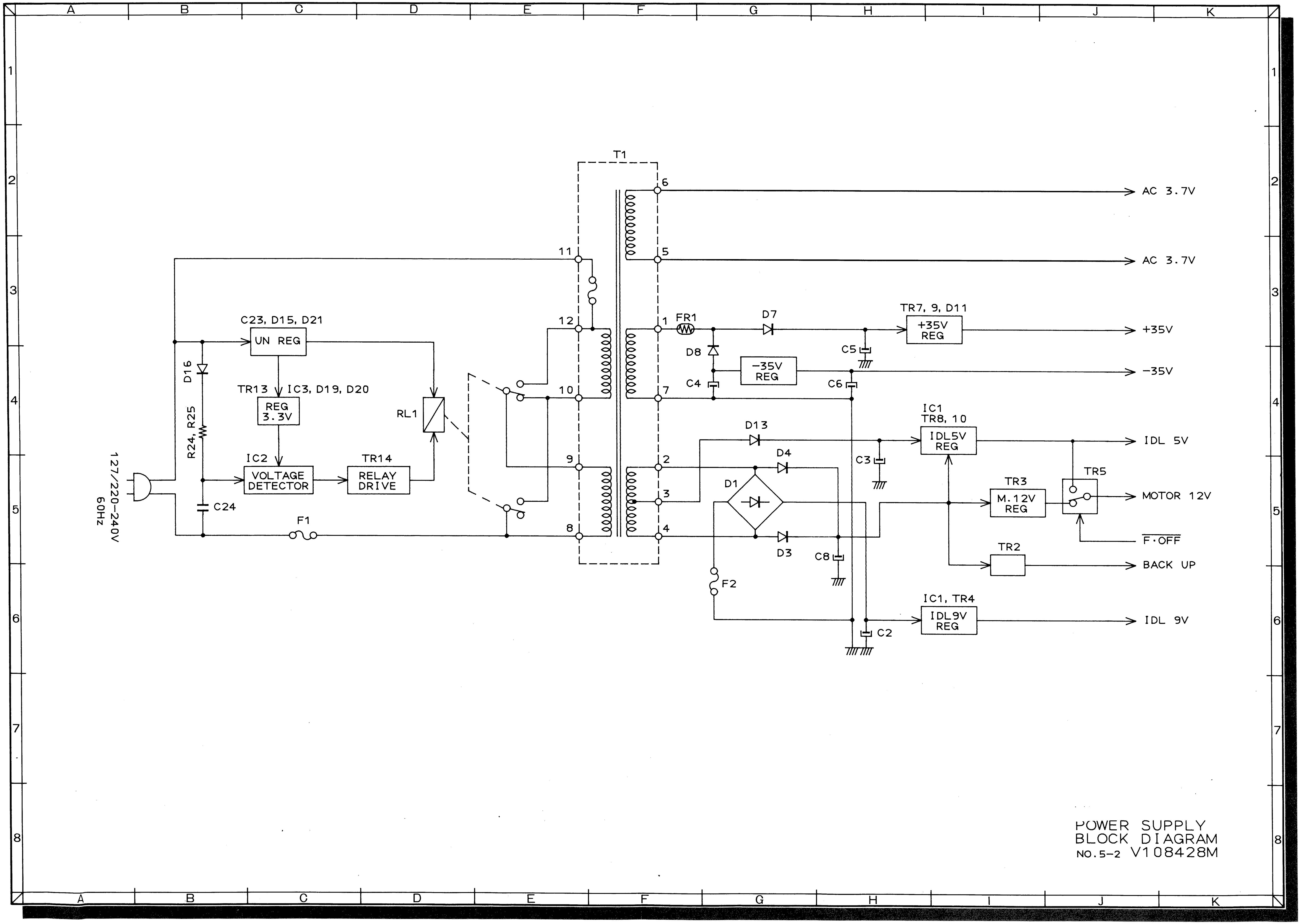


AC3.7V
AC3.7V
+35V
-35V
BACK UP
IDL 9V/12V (EO.12V)
IDL 5V
MOTOR 12V
TR15 SHUT OFF SW
TR10 P-DOWN DETECTOR
TR13.D15 +35V REG
D14.D23.C24.C25 -35V REG
TR3 BACK UP 5V
F.OFF
TR6 H L
5V
12V
TR2 5V REG
IC2 COMP 2/2
TR12.D19 SW REG
IC2.COMP 2/2
TR7.TR8.TR9.TR11 9V/12V REG
TR1.IC1 5V PULSE GENERATOR
VR1
TR4.TR5 12V REG
C3
C2
D8
D6
FR1
D7
D5
EO
EO.OPEN OTHER SHORT
D1
D2
D3
D4
F2
4
5
6
7
8
9

POWER SUPPLY
BLOCK DIAGRAM
NO.5-1 871024F


A
B
C
D
E
F
G
H
I
J
K
1
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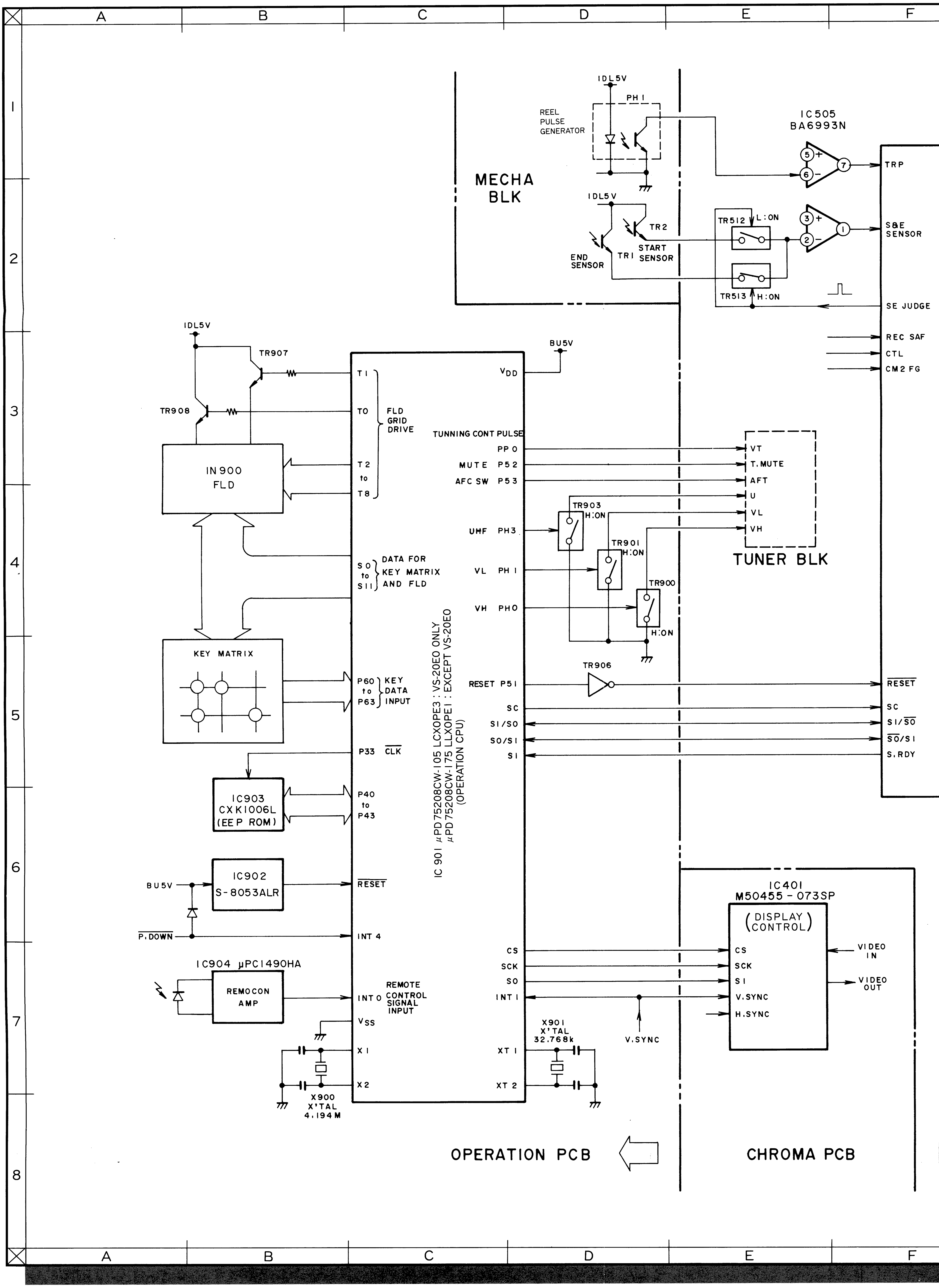
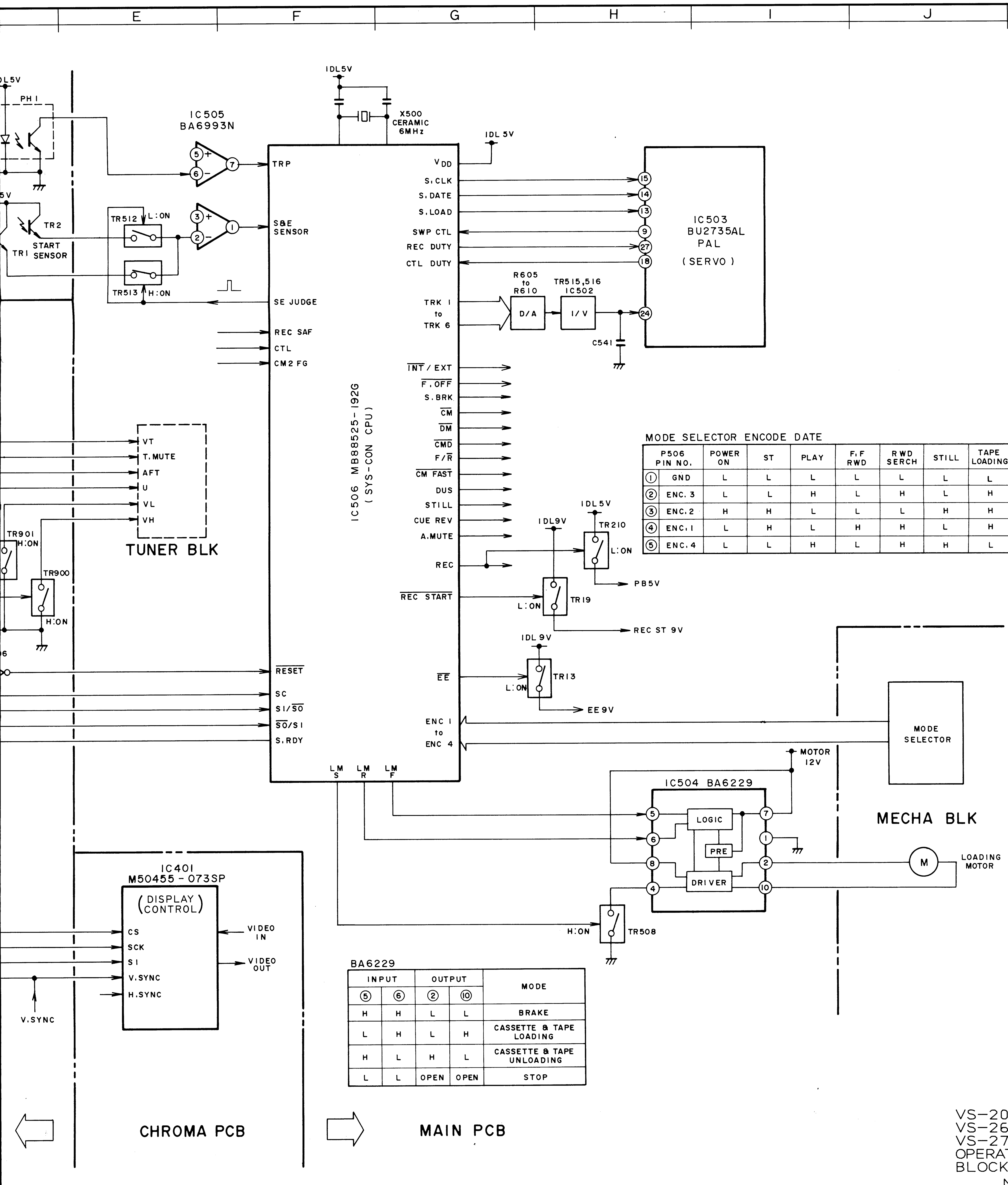
3
4
5
6
7
8
T1
6
5
11
12
10
9
8
1
7
2
3
4
AC 3.7V
AC 3.7V
FR1
D7
TR7, 9, D11
+35V
REG
+35V
D8
C5
-35V
REG
-35V
C4
C6
C23, D15, D21
UN REG
D16
TR13
IC3, D19, D20
REG
3.3V
RL1
R24, R25
IC2
VOLTAGE
DETECTOR
TR14
RELAY
DRIVE
127/220-240V
60Hz
C24
F1
IC1
TR8, 10
D13
IDL5V
REG
IDL 5V
D4
C3
D1
TR3
M.12V
REG
TR5
MOTOR 12V
F·OFF
D3
C8
TR2
BACK UP
F2
IC1, TR4
IDL9V
REG
IDL 9V
C2

POWER SUPPLY
BLOCK DIAGRAM
NO.5-2 V108428M


A
B
C
D
E
F
1
2
3
4
5
6
7
8
MECHA BLK
IDL5V
PH1
REEL PULSE GENERATOR
IDL5V
TR2
END SENSOR
TR1
START SENSOR
IC505
BA6993N
TRP
TR512
L:ON
S&E SENSOR
TR513
H:ON
SE JUDGE
REC SAF
CTL
CM2 FG
IDL5V
TR907
TR908
BU5V
T1
T0
FLD GRID DRIVE
VDD
TUNNING CONT PULSE
PP0
MUTE P52
AFC SW P53
IN900 FLD
T2 to T8
VT
T.MUTE
AFT
U
VL
VH
TR903
H:ON
UHF PH3
TR901
H:ON
TUNER BLK
S0 to S11
DATA FOR KEY MATRIX AND FLD
VL PH1
TR900
VH PH0
H:ON
KEY MATRIX
TR906
RESET P51
RESET
P60 to P63
KEY DATA INPUT
SC
SI/SO
SO/SI
SI
SC
SI/SO
SO/SI
S.RDY
P33 CLK
IC 901 μPD75208CW-105 LCX0PE3 : VS-20E0 ONLY
μPD75208CW-175 LLX0PE1 : EXCEPT VS-20E0
(OPERATION CPU)
IC903
CXK1006L
(EEP ROM)
P40 to P43
IC902
S-8053ALR
BU5V
RESET
IC401
M50455-073SP
(DISPLAY CONTROL)
P.DOWN
INT 4
CS
SCK
SO
CS
SCK
SI
VIDEO IN
VIDEO OUT
IC904 μPC1490HA
REMOCON AMP
INT 0
REMOTE CONTROL SIGNAL INPUT
INT 1
V.SYNC
H.SYNC
VSS
V.SYNC
X901 X'TAL 32.768k
X1
XT1
X2
XT2
X900 X'TAL 4.194M
OPERATION PCB
CHROMA PCB
A
B
C
D
E
F


E
F
G
H
I
J
IDL5V
PH1
IC505
BA6993N
5
6
7
3
2
1
TR2
TR1
START SENSOR
TR512
L:ON
TR513
H:ON
IDL5V
X500
CERAMIC
6MHz
IDL 5V
TRP
S&E SENSOR
SE JUDGE
REC SAF
CTL
CM2 FG
VDD
S.CLK
S.DATE
S.LOAD
SWP CTL
REC DUTY
CTL DUTY
TRK 1 to TRK 6
R605 to R610
D/A
TR515,516
IC502
I/V
C541
15
14
13
9
27
18
24
IC503
BU2735AL
PAL
(SERVO)
IC506 MB88525-192G
(SYS-CON CPU)
INT/EXT
F.OFF
S.BRK
CM
DM
CMD
F/R
CM FAST
DUS
STILL
CUE REV
A.MUTE
REC
REC START
EE
IDL5V
TR210
L:ON
PB5V
IDL9V
TR19
L:ON
REC ST 9V
IDL 9V
TR13
L:ON
EE 9V
VT
T.MUTE
AFT
U
VL
VH
TUNER BLK
TR901
H:ON
TR900
H:ON
RESET
SC
SI/SO
SO/SI
S.RDY
ENC 1 to ENC 4
LM S
LM R
LM F
MOTOR 12V
IC504 BA6229
LOGIC
PRE
DRIVER
5
6
8
4
7
1
2
10
TR508
H:ON
MODE SELECTOR
MECHA BLK
M
LOADING MOTOR
IC401
M50455-073SP
(DISPLAY CONTROL)
CS
SCK
SI
V.SYNC
H.SYNC
VIDEO IN
VIDEO OUT
V.SYNC
CHROMA PCB
MAIN PCB

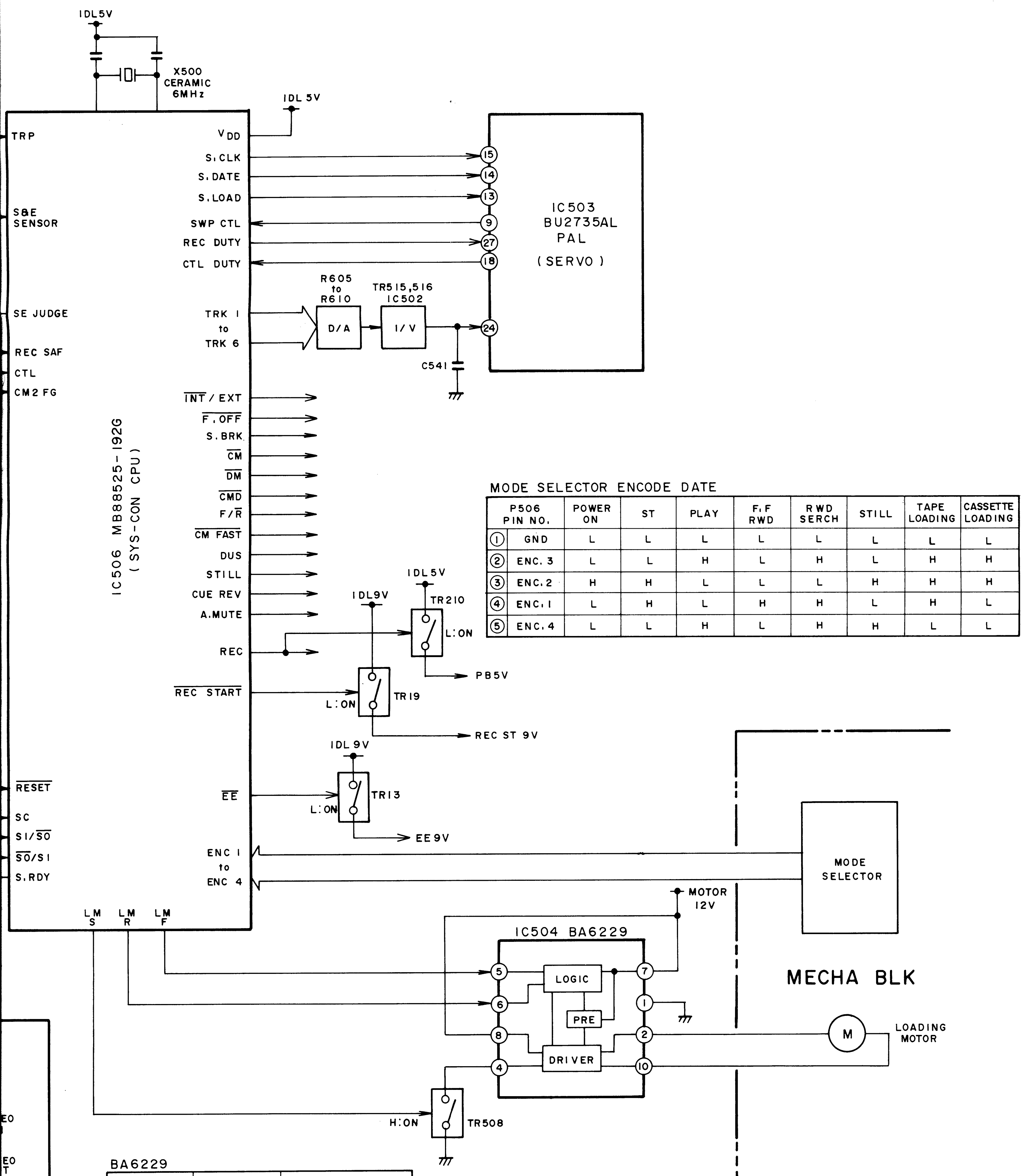
MODE SELECTOR ENCODE DATE

P506 PIN NO.		POWER ON	ST	PLAY	F.F RWD	RWD SERCH	STILL	TAPE LOADING
①	GND	L	L	L	L	L	L	L
②	ENC. 3	L	L	H	L	H	L	H
③	ENC. 2	H	H	L	L	L	H	H
④	ENC. 1	L	H	L	H	H	L	H
⑤	ENC. 4	L	L	H	L	H	H	L

BA6229

INPUT		OUTPUT		MODE
⑤	⑥	②	⑩	
H	H	L	L	BRAKE
L	H	L	H	CASSETTE & TAPE LOADING
H	L	H	L	CASSETTE & TAPE UNLOADING
L	L	OPEN	OPEN	STOP

VS-20
VS-26
VS-27
OPERAT
BLOCK


IDL5V
X500
CERAMIC
6MHz
IDL 5V
TRP
VDD
S.CLK
S.DATE
S.LOAD
S&E
SENSOR
SWP CTL
REC DUTY
CTL DUTY
15
14
13
9
27
18
IC503
BU2735AL
PAL
(SERVO)
R605
to
R610
TR515,516
IC502
D/A
I/V
24
C541
SE JUDGE
TRK 1
to
TRK 6
REC SAF
CTL
CM2 FG
INT / EXT
F.OFF
S.BRK
CM
DM
CMD
F/R
CM FAST
DUS
STILL
CUE REV
A.MUTE
REC
REC START
IC506 MB88525-192G
(SYS-CON CPU)
IDL5V
TR210
L:ON
PB5V
IDL9V
TR19
L:ON
REC ST 9V
IDL 9V
TR13
L:ON
EE9V
RESET
SC
SI/SO
SO/SI
S.RDY
EE
ENC 1
to
ENC 4
MODE
SELECTOR
MOTOR
12V
LM S
LM R
LM F
IC504 BA6229
LOGIC
PRE
DRIVER
5
6
8
4
7
1
2
10
MECHA BLK
M
LOADING
MOTOR
H:ON
TR508
EO
EO
T

MODE SELECTOR ENCODE DATE

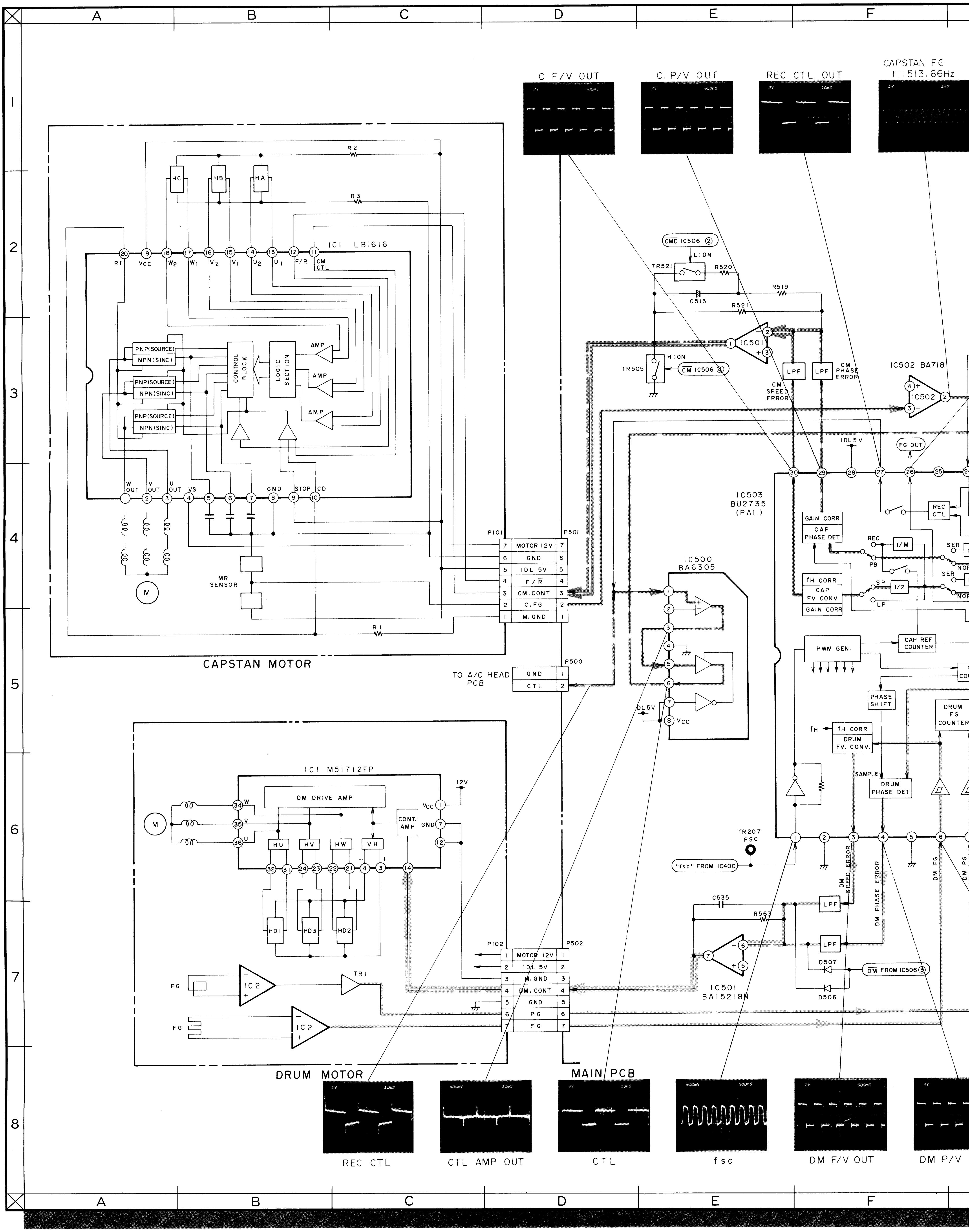
P506 PIN NO.	POWER ON	ST	PLAY	F.F RWD	RWD SERCH	STILL	TAPE LOADING	CASSETTE LOADING
① GND	L	L	L	L	L	L	L	L
② ENC. 3	L	L	H	L	H	L	H	H
③ ENC. 2	H	H	L	L	L	H	H	H
④ ENC. 1	L	H	L	H	H	L	H	L
⑤ ENC. 4	L	L	H	L	H	H	L	L

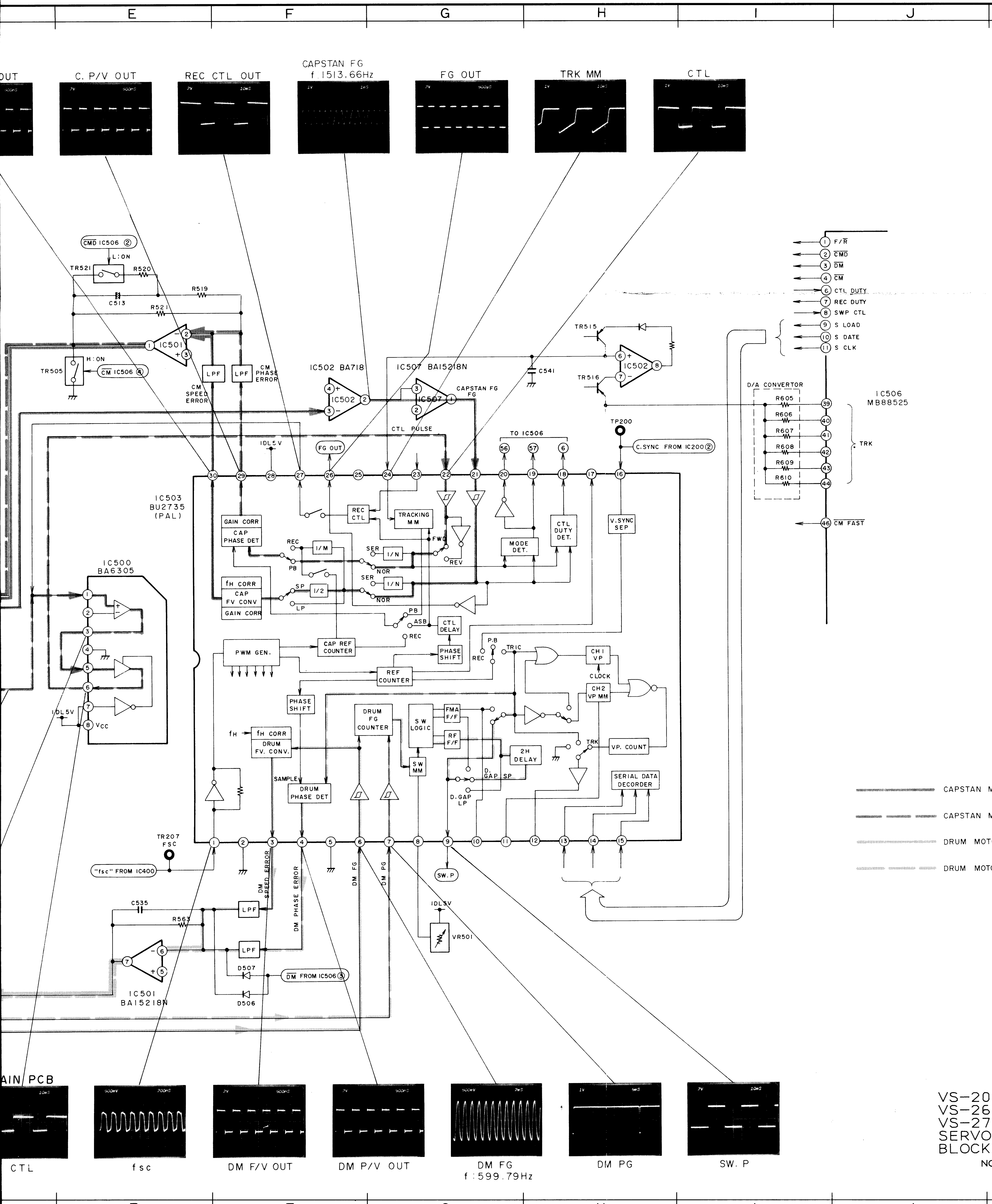
BA6229

INPUT		OUTPUT		MODE
⑤	⑥	②	⑩	
H	H	L	L	BRAKE
L	H	L	H	CASSETTE & TAPE LOADING
H	L	H	L	CASSETTE & TAPE UNLOADING
L	L	OPEN	OPEN	STOP

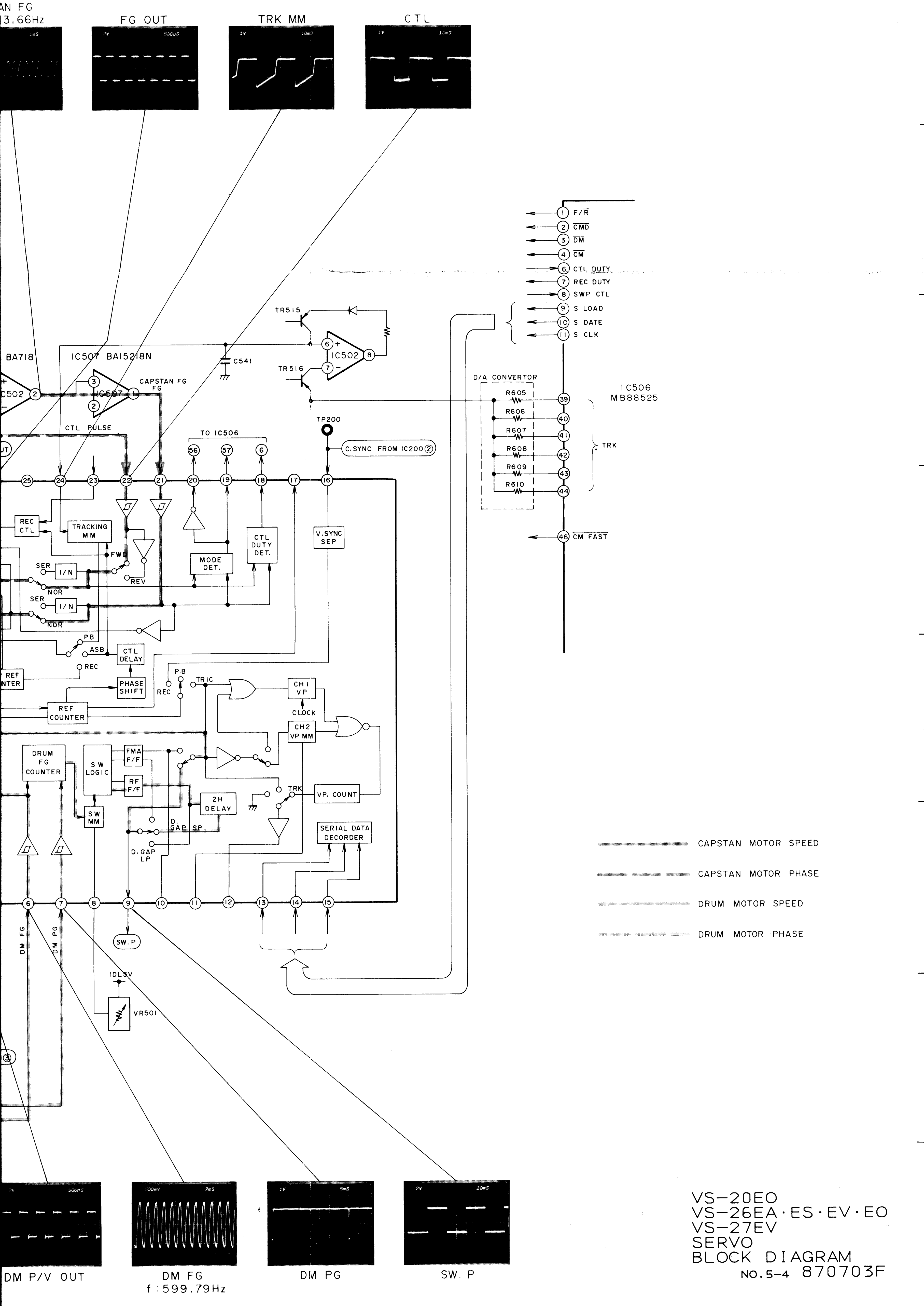
⇨ MAIN PCB

VS-20EO
VS-26EA·ES·EV·EO
VS-27EV
OPERATION & SYSCON
BLOCK DIAGRAM
NO.5-3 870602F


A
B
C
D
E
F
1
2
3
4
5
6
7
8
C F/V OUT
C. P/V OUT
REC CTL OUT
CAPSTAN FG
f 1513.66Hz
CAPSTAN MOTOR
IC1 LB1616
R2
R3
R1
HC
HB
HA
Rf
Vcc
W2
W1
V2
V1
U2
U1
F/R
CM CTL
PNP(SOURCE)
NPN(SINC)
CONTROL BLOCK
LOGIC SECTION
AMP
W OUT
V OUT
U OUT
VS
GND
STOP
CD
MR SENSOR
M
P101
P501
MOTOR 12V
GND
IDL 5V
F/R
CM.CONT
C.FG
M.GND
CMD IC506 ②
L:ON
TR521
R520
R519
C513
R521
IC501
H:ON
TR505
CM IC506 ④
LPF
CM SPEED ERROR
CM PHASE ERROR
IC502 BA718
IC502
IDL5V
FG OUT
IC503
BU2735
(PAL)
GAIN CORR
CAP PHASE DET
REC CTL
REC
PB
1/M
SER
NOR
fH CORR
CAP FV CONV
SP
LP
1/2
PWM GEN.
CAP REF COUNTER
IC500
BA6305
Vcc
P500
TO A/C HEAD PCB
CTL
PHASE SHIFT
DRUM FG COUNTER
fH
fH CORR
DRUM FV. CONV.
SAMPLE
DRUM PHASE DET
TR207
FSC
"fsc" FROM IC400
DM SPEED ERROR
DM PHASE ERROR
DM FG
DM PG
C535
R563
D507
D506
DM FROM IC506 ③
IC501
BA15218N
IC1 M51712FP
DM DRIVE AMP
12V
CONT. AMP
HU
HV
HW
VH
HD1
HD3
HD2
P102
P502
DM. CONT
PG
FG
IC2
TR1
DRUM MOTOR
MAIN PCB
REC CTL
CTL AMP OUT
CTL
fsc
DM F/V OUT
DM P/V


E
F
G
H
I
J
OUT
C. P/V OUT
REC CTL OUT
CAPSTAN FG
f : 1513.66Hz
FG OUT
TRK MM
CTL
CMD IC506 ②
L:ON
TR521
R520
R519
C513
R521
IC501
TR505
H:ON
CM IC506 ④
LPF
LPF
CM SPEED ERROR
CM PHASE ERROR
IC502 BA718
IC502
IC507 BA15218N
IC507
CAPSTAN FG
FG
C541
TR515
TR516
CTL PULSE
IDL5V
FG OUT
TO IC506
TP200
C.SYNC FROM IC200 ②
IC503
BU2735
(PAL)
GAIN CORR
CAP PHASE DET
REC CTL
TRACKING MM
FWD
REV
MODE DET.
CTL DUTY DET.
V.SYNC SEP
REC
PB
SER
I/M
I/N
NOR
fH CORR
CAP FV CONV
GAIN CORR
SP
LP
1/2
ASB
CTL DELAY
PWM GEN.
CAP REF COUNTER
PHASE SHIFT
REF COUNTER
P.B
REC
TRIC
CH1 VP
CLOCK
CH2 VP MM
PHASE SHIFT
DRUM FG COUNTER
SW LOGIC
FMA F/F
RF F/F
SW MM
2H DELAY
D. GAP SP
D. GAP LP
TRK
VP. COUNT
SERIAL DATA DECORDER
fH
fH CORR
DRUM FV. CONV.
SAMPLE
DRUM PHASE DET
IC500
BA6305
IDL5V
VCC
TR207
FSC
"fsc" FROM IC400
SW. P
DM SPEED ERROR
DM PHASE ERROR
DM FG
DM PG
IDL5V
VR501
C535
R563
LPF
LPF
D507
D506
DM FROM IC506 ③
IC501
BA15218N
F/R
CMD
DM
CM
CTL DUTY
REC DUTY
SWP CTL
S LOAD
S DATE
S CLK
D/A CONVERTOR
R605
R606
R607
R608
R609
R610
IC506
MB88525
TRK
CM FAST
CAPSTAN M
CAPSTAN M
DRUM MOT
DRUM MOT
AIN PCB
CTL
fsc
DM F/V OUT
DM P/V OUT
DM FG
f : 599.79Hz
DM PG
SW. P

VS-20
VS-26
VS-27
SERVO
BLOCK
NO



AN FG
13,66Hz
FG OUT
TRK MM
CTL
F/R
CMD
DM
CM
CTL DUTY
REC DUTY
SWP CTL
S LOAD
S DATE
S CLK
TR515
TR516
IC502
C541
BA718
IC507 BA15218N
CAPSTAN FG
FG
D/A CONVERTOR
R605
R606
R607
R608
R609
R610
IC506
MB88525
TRK
TP200
C.SYNC FROM IC200 ②
CTL PULSE
TO IC506
REC CTL
TRACKING MM
FWD
REV
SER
I/N
NOR
MODE DET.
CTL DUTY DET.
V.SYNC SEP
CM FAST
PB
ASB
REC
CTL DELAY
REF COUNTER
PHASE SHIFT
REF COUNTER
P.B
REC
TRIC
CH1 VP
CLOCK
CH2 VP MM
DRUM FG COUNTER
SW LOGIC
FMA F/F
RF F/F
SW MM
2H DELAY
D. GAP SP
D.GAP LP
TRK
VP. COUNT
SERIAL DATA DECORDER
SW. P
DM FG
DM PG
IDLSV
VR501
DM P/V OUT
DM FG
f:599.79Hz
DM PG
SW. P

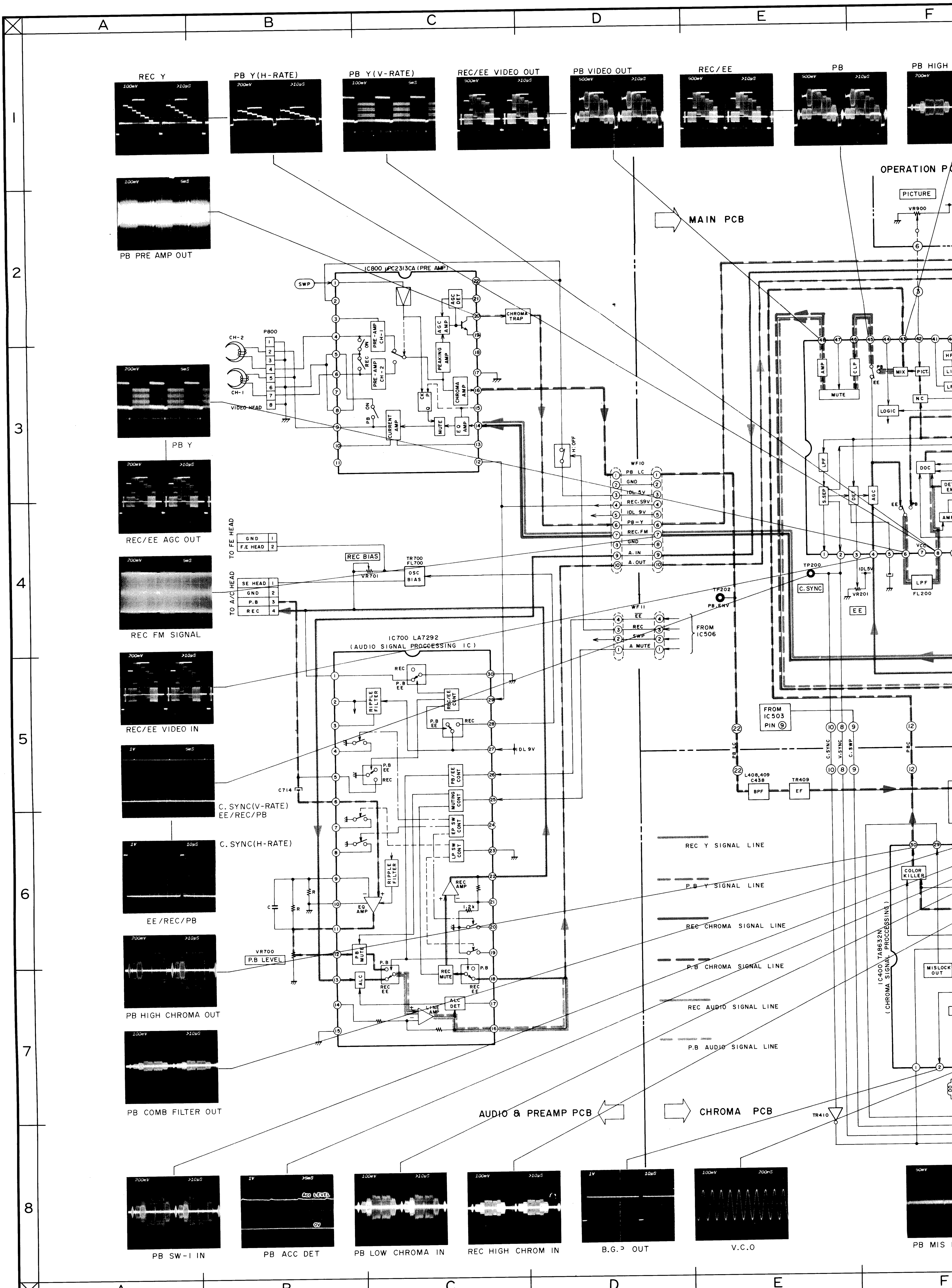
CAPSTAN MOTOR SPEED

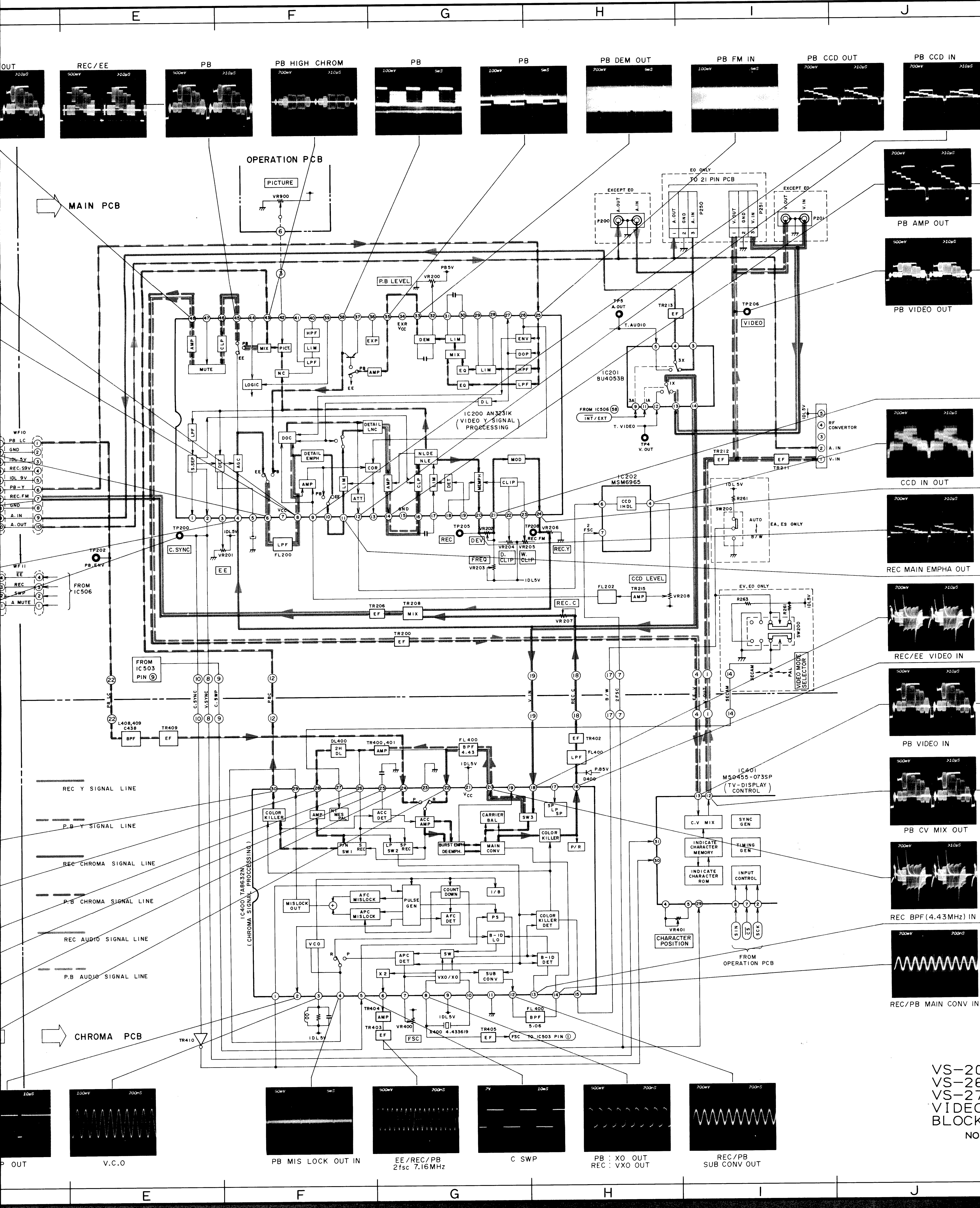
CAPSTAN MOTOR PHASE

DRUM MOTOR SPEED

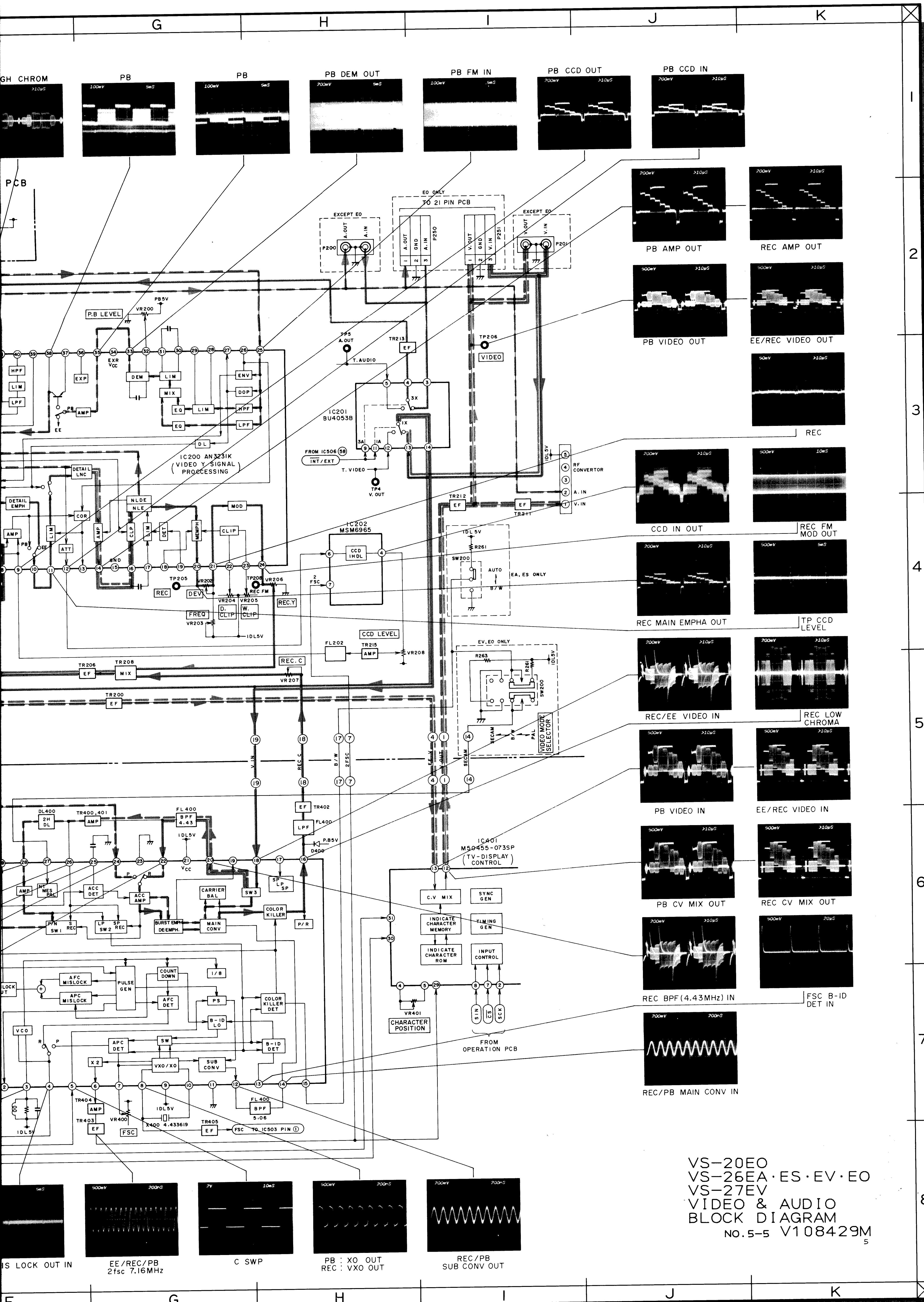
DRUM MOTOR PHASE

VS-20EO
VS-26EA·ES·EV·EO
VS-27EV
SERVO
BLOCK DIAGRAM
NO.5-4 870703F

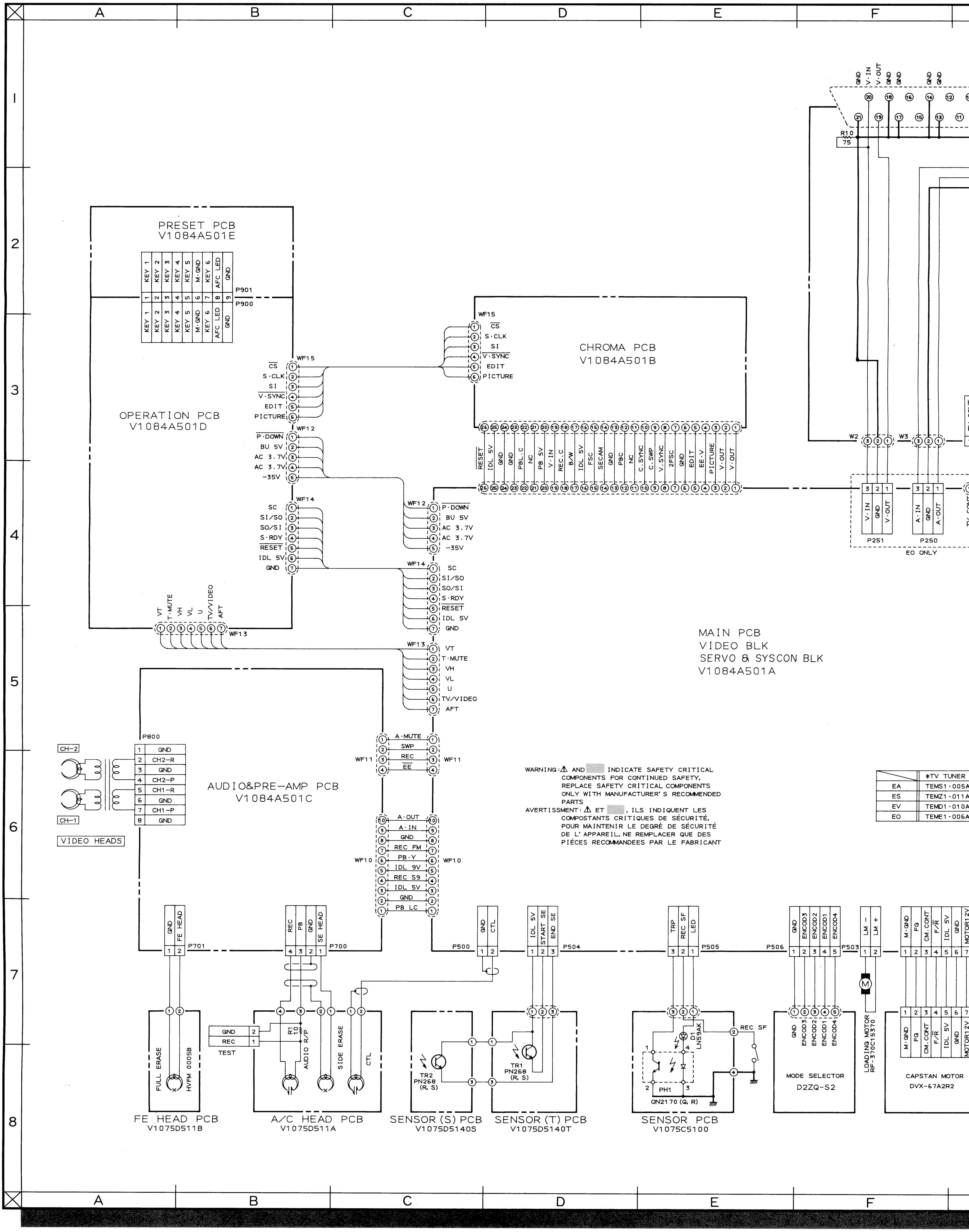

A
B
C
D
E
F
1
2
3
4
5
6
7
8
REC Y
PB Y(H-RATE)
PB Y(V-RATE)
REC/EE VIDEO OUT
PB VIDEO OUT
REC/EE
PB
PB HIGH
PB PRE AMP OUT
PB Y
REC/EE AGC OUT
REC FM SIGNAL
REC/EE VIDEO IN
C.SYNC(V-RATE)
EE/REC/PB
C.SYNC(H-RATE)
EE/REC/PB
PB HIGH CHROMA OUT
PB COMB FILTER OUT
PB SW-1 IN
PB ACC DET
PB LOW CHROMA IN
REC HIGH CHROM IN
B.G.P OUT
V.C.O
PB MIS
OPERATION P
PICTURE
VR900
MAIN PCB
IC800 μPC2313CA (PRE AMP)
SWP
P800
CH-2
CH-1
VIDEO HEAD
PRE-AMP CH-1
PRE-AMP CH-2
AGC DET
AGC AMP
PEAKING AMP
CHROMA AMP
CHROMA TRAP
CURRENT AMP
MUTE
EQ AMP
H.OFF
TO FE HEAD
GND
F.E HEAD
TO A/C HEAD
SE HEAD
P.B
REC
REC BIAS
VR701
TR700
FL700
OSC BIAS
WF10
PB LC
IDL 5V
REC.S9V
IDL 9V
PB-Y
REC.FM
A. IN
A. OUT
WF11
EE
SWP
A MUTE
FROM IC506
TP200
TP202
PB ENV
C.SYNC
IDL5V
VR201
LPF
FL200
IC700 LA7292
(AUDIO SIGNAL PROCESSING IC)
RIPPLE FILTER
REC/EE CONT
PB/EE CONT
MUTING CONT
EP SW CONT
LP SW CONT
IDL 9V
C714
EQ AMP
REC AMP
PB MUTE
REC MUTE
ALC
ALC DET
LINE AMP
VR700
P.B LEVEL
FROM IC503 PIN ⑨
PB LC
C.SYNC
V.SYNC
C.SWP
PBC
L408,409
C438
TR409
BPF
EF
REC Y SIGNAL LINE
P.B Y SIGNAL LINE
REC CHROMA SIGNAL LINE
P.B CHROMA SIGNAL LINE
REC AUDIO SIGNAL LINE
P.B AUDIO SIGNAL LINE
AUDIO & PREAMP PCB
CHROMA PCB
TR410
IC400 TA8632N (CHROMA SIGNAL PROCESSING)
COLOR KILLER
MISLOCK OUT
AMP
CLP
MUTE
MIX
PICT.
NC
LOGIC
S.SEP
DLY
AGC
DOC
VCC
100mV
200mV
500mV
1V
>10μS
5mS
ACC LEVEL
0V


E
F
G
H
I
J
OUT
REC/EE
PB
PB HIGH CHROM
PB
PB
PB DEM OUT
PB FM IN
PB CCD OUT
PB CCD IN
PB AMP OUT
PB VIDEO OUT
CCD IN OUT
REC MAIN EMPHA OUT
REC/EE VIDEO IN
PB VIDEO IN
PB CV MIX OUT
REC BPF(4.43MHz) IN
REC/PB MAIN CONV IN
OPERATION PCB
PICTURE
VR900
MAIN PCB
P.B LEVEL
VR200
PB5V
EXCEPT EO
EO ONLY
TO 21 PIN PCB
A.OUT
A.IN
P200
P230
V.OUT
V.IN
P251
P201
GND
TP5 A.OUT
T.AUDIO
TR213
EF
TP206
VIDEO
IC201 BU4053B
FROM IC506 (58)
INT/EXT
T. VIDEO
TP4 V. OUT
IDL5V
RF CONVERTOR
A. IN
V. IN
TR212
TR211
IC200 AN3231K
(VIDEO Y SIGNAL PROCESSING)
IC202 MSM6965
CCD 1HDL
2 FSC
SW200
R261
AUTO
B/W
EA, ES ONLY
CCD LEVEL
FL202
TR215
AMP
VR208
EV, EO ONLY
R263
VIDEO MODE SELECTOR
SECAM
PAL
AMP
CLIP
MUTE
MIX
PICT.
HPF
LIM
LPF
NC
LOGIC
EXP
DEM
EQ
ENV
DOP
DL
EXR VCC
LPF
S.SEP
DEF
AGC
DOC
DETAIL EMPH
DETAIL LNC
COR
ATT
NLDE
NLE
DET
MEMPH
MOD
VCC
GND
LPF
FL200
TP200
C.SYNC
TP202
PB.ENV
VR201
EE
TP205
REC
DEV
VR202
TP208
REC FM
VR206
REC.Y
VR204
D. CLIP
VR205
W. CLIP
FREQ
VR203
IDL5V
WF10
PB LC
GND
IDL 5V
REC.S9V
IDL 9V
PB-Y
REC.FM
GND
A. IN
A. OUT
WF11
EE
REC
SWP
A MUTE
FROM IC506
TR206
TR208
MIX
REC. C
VR207
TR200
FROM IC503 PIN (9)
C.SYNC
V.SYNC
C.SWP
PBC
V IN
REC C
B/W
2FSC
EE W
V OUT
L408,409 C438
BPF
TR409
EF
DL400
2H DL
TR400,401
AMP
FL400
BPF 4.43
TR402
LPF
P.B5V
D400
IC401 M50455-073SP
(TV-DISPLAY CONTROL)
REC Y SIGNAL LINE
P.B Y SIGNAL LINE
REC CHROMA SIGNAL LINE
P.B CHROMA SIGNAL LINE
REC AUDIO SIGNAL LINE
P.B AUDIO SIGNAL LINE
COLOR KILLER
INT MES PAL
ACC DET
ACC AMP
CARRIER BAL
SW3
SP LP SP
P/R
P/N SW1
S REC
LP SW2
SP REC
BURST EMPH DEEMPH.
MAIN CONV
C-V MIX
SYNC GEN
INDICATE CHARACTER MEMORY
TIMING GEN
INDICATE CHARACTER ROM
INPUT CONTROL
IC400 TA8632N
(CHROMA SIGNAL PROCESSING)
MISLOCK OUT
AFC MISLOCK
APC MISLOCK
PULSE GEN
COUNT DOWN
1/8
AFC DET
PS
COLOR KILLER DET
B-ID LO
B-ID DET
VCO
APC DET
SW
X2
VXO/XO
SUB CONV
VR401
CHARACTER POSITION
SIN
CS
SCK
FROM OPERATION PCB
TR404
TR403
VR400
FSC
X400 4.433619
TR405
TO IC503 PIN (1)
BPF 5.06
CHROMA PCB
TR410
OUT
V.C.O
PB MIS LOCK OUT IN
EE/REC/PB 2fsc 7.16MHz
C SWP
PB : XO OUT
REC : VXO OUT
REC/PB SUB CONV OUT

VS-20
VS-26
VS-27
VIDEO
BLOCK
NO


G
H
I
J
K
1
2
3
4
5
6
7
8
F
GH CHROM
PB
PB
PB DEM OUT
PB FM IN
PB CCD OUT
PB CCD IN
PB AMP OUT
REC AMP OUT
PB VIDEO OUT
EE/REC VIDEO OUT
REC
CCD IN OUT
REC FM MOD OUT
REC MAIN EMPHA OUT
TP CCD LEVEL
REC/EE VIDEO IN
REC LOW CHROMA
PB VIDEO IN
EE/REC VIDEO IN
PB CV MIX OUT
REC CV MIX OUT
REC BPF(4.43MHz) IN
FSC B-ID DET IN
REC/PB MAIN CONV IN
IS LOCK OUT IN
EE/REC/PB 2fsc 7.16MHz
C SWP
PB : XO OUT
REC : VXO OUT
REC/PB SUB CONV OUT
PCB
EXCEPT EO
EO ONLY
TO 21 PIN PCB
P200
A.OUT
A.IN
GND
P250
V.OUT
V.IN
P251
P201
P.B LEVEL
VR200
PB5V
TP5 A.OUT
TR213
EF
T.AUDIO
TP206
VIDEO
HPF
LIM
LPF
EXP
EXR VCC
DEM
MIX
EQ
ENV
DOP
AMP
EE
DL
IC201 BU4053B
3X
1X
3A
1A
FROM IC506 58
INT/EXT
T. VIDEO
TP4 V. OUT
IDL5V
RF CONVERTOR
A. IN
V. IN
IC200 AN3231K
(VIDEO Y SIGNAL PROCCESSING)
DETAIL LNC
DETAIL EMPH
COR
NLDE
NLE
MOD
CLIP
DET
MEMPH
ATT
GND
TR212
TR211
IC202 MSM6965
CCD 1HDL
2 FSC
SW200
AUTO
B/W
EA, ES ONLY
TP205
REC
DEV
VR202
TP208
REC FM
VR206
VR204
VR205
REC.Y
FREQ
D. CLIP
W. CLIP
VR203
CCD LEVEL
FL202
TR215
VR208
TR206
TR208
REC.C
VR207
TR200
EV, EO ONLY
R263
R261
SECAM
PAL
VIDEO MODE SELECTOR
V IN
REC C
B/W
2FSC
EE V
V OUT
SECAM
DL400
2H DL
TR400,401
FL400
BPF 4.43
IDL5V
VCC
TR402
LPF
P.B5V
D400
IC401
M50455-073SP
(TV-DISPLAY CONTROL)
NT MES PAL
ACC DET
ACC AMP
CARRIER BAL
SW3
SP LP SP
COLOR KILLER
P/N SW1
LP SW2
BURST EMPH DEEMPH.
MAIN CONV
P/R
C.V MIX
SYNC GEN
INDICATE CHARACTER MEMORY
TIMING GEN
INDICATE CHARACTER ROM
INPUT CONTROL
AFC MISLOCK
APC MISLOCK
PULSE GEN
COUNT DOWN
1/8
AFC DET
PS
COLOR KILLER DET
B-ID LO
VCO
APC DET
SW
B-ID DET
X 2
VXO/XO
SUB CONV
VR401
CHARACTER POSITION
SIN
CS
SCK
FROM OPERATION PCB
TR404
TR403
VR400
FSC
X400 4.433619
TR405
FL400 BPF 5.06
FSC TO IC503 PIN ①
IDL5V

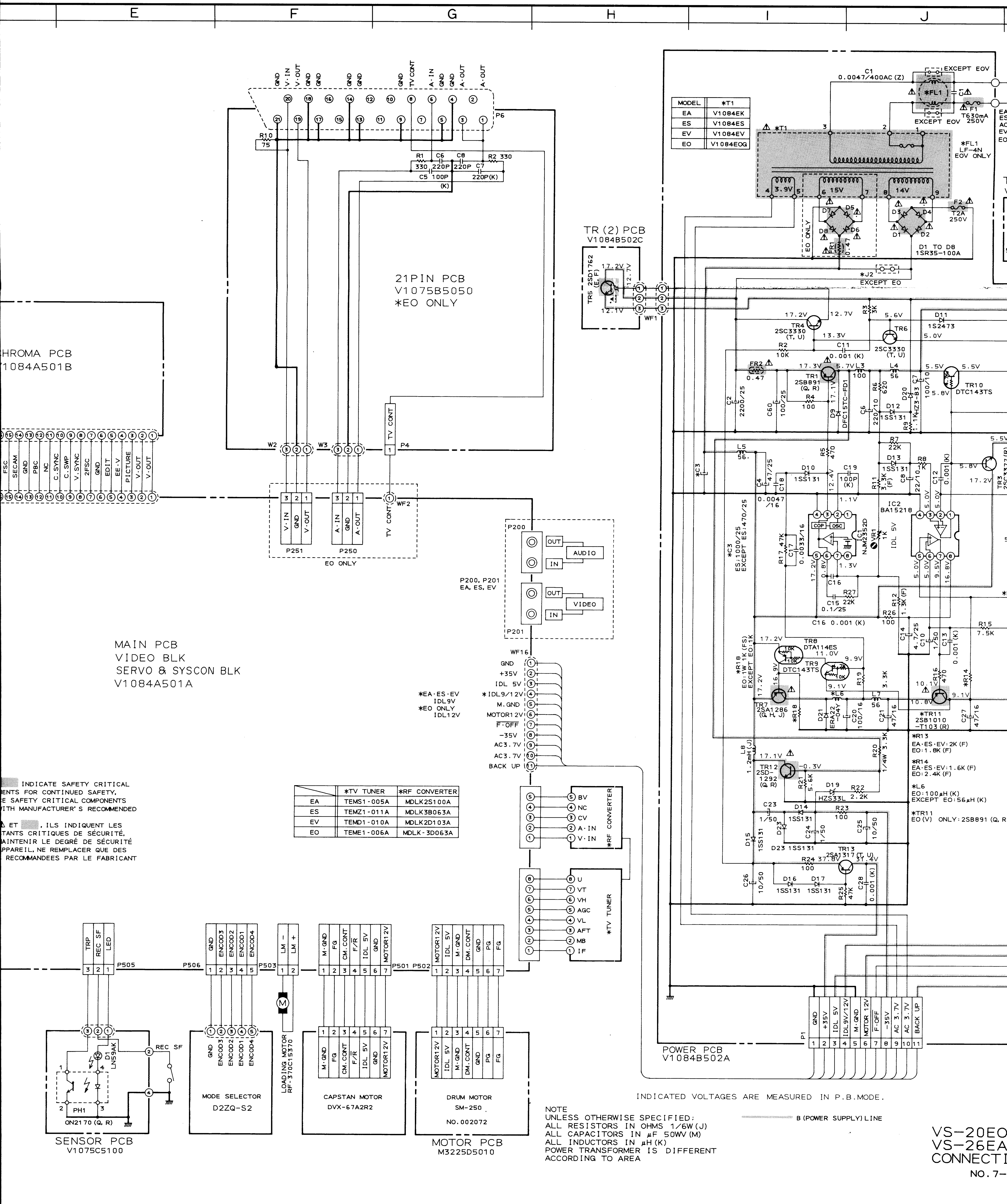
VS-20EO
VS-26EA·ES·EV·EO
VS-27EV
VIDEO & AUDIO
BLOCK DIAGRAM
NO.5-5 V108429M
5


A
B
C
D
E
F
1
2
3
4
5
6
7
8
PRESET PCB
V1084A501E
KEY 1
KEY 2
KEY 3
KEY 4
KEY 5
M·GND
KEY 6
AFC LED
GND
P901
P900
OPERATION PCB
V1084A501D
CHROMA PCB
V1084A501B
WF15
CS
S·CLK
SI
V·SYNC
EDIT
PICTURE
WF12
P·DOWN
BU 5V
AC 3.7V
AC 3.7V
-35V
WF14
SC
SI/SO
SO/SI
S·RDY
RESET
IDL 5V
GND
WF13
VT
T·MUTE
VH
VL
U
TV/VIDEO
AFT
RESET
IDL 5V
GND
PBL.C
NC
PB 5V
V·IN
REC.C
B/W
IDL 5V
FSC
SECAM
GND
PBC
NC
C.SYNC
C.SWP
V.SYNC
2FSC
GND
EDIT
EE·V
PICTURE
V·OUT
V·OUT
MAIN PCB
VIDEO BLK
SERVO & SYSCON BLK
V1084A501A
GND
V·IN
V·OUT
GND
GND
GND
GND
R10
75
W2
W3
V·IN
GND
V·OUT
A·IN
GND
A·OUT
P251
P250
EO ONLY
WF11
A·MUTE
SWP
REC
EE
WF10
A·OUT
A·IN
GND
REC FM
PB·Y
IDL 9V
REC S9
IDL 5V
GND
PB LC
P800
GND
CH2-R
GND
CH2-P
CH1-R
GND
CH1-P
GND
CH-2
CH-1
VIDEO HEADS
AUDIO&PRE-AMP PCB
V1084A501C
GND
FE HEAD
P701
REC
PB
GND
SE HEAD
P700
GND
CTL
P500
IDL 5V
START SE
END SE
P504
TRP
REC SF
LED
P505
P506
GND
ENCOD3
ENCOD2
ENCOD1
ENCOD4
P503
LM -
LM +
M·GND
FG
CM.CONT
F/R
IDL 5V
GND
MOTOR12V
FULL ERASE
HVFM 0005B
FE HEAD PCB
V1075D511B
GND
REC
TEST
R1
10
AUDIO R/P
SIDE ERASE
CTL
A/C HEAD PCB
V1075D511A
TR2
PN268
(R, S)
SENSOR (S) PCB
V1075D5140S
TR1
PN268
(R, S)
SENSOR (T) PCB
V1075D5140T
D1
LN59AK
REC SF
PH1
ON2170 (Q, R)
SENSOR PCB
V1075C5100
MODE SELECTOR
D2ZQ-S2
LOADING MOTOR
RF-370C15370
CAPSTAN MOTOR
DVX-67A2R2

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL
COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS
ONLY WITH MANUFACTURER'S RECOMMENDED
PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES
COMPOSTANTS CRITIQUES DE SÉCURITÉ,
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
DE L'APPAREIL, NE REMPLACER QUE DES
PIÈCES RECOMMANDEES PAR LE FABRICANT

	*TV TUNER
EA	TEMS1-005A
ES	TEMZ1-011A
EV	TEMD1-010A
EO	TEME1-006A


E
F
G
H
I
J
21PIN PCB
V1075B5050
*EO ONLY
CHROMA PCB
V1084A501B
MAIN PCB
VIDEO BLK
SERVO & SYSCON BLK
V1084A501A
TR (2) PCB
V1084B502C
POWER PCB
V1084B502A
SENSOR PCB
V1075C5100
MOTOR PCB
M3225D5010
MODE SELECTOR
D2ZQ-S2
LOADING MOTOR
RF-370C15370
CAPSTAN MOTOR
DVX-67A2R2
DRUM MOTOR
SM-250
NO.002072
*RF CONVERTER
*TV TUNER
AUDIO
VIDEO
P200, P201
EA, ES, EV
EO ONLY
P6
P4
P251
P250
WF1
WF2
WF16
P505
P506
P503
P501
P502
P1
GND
+35V
IDL 5V
*IDL9/12V
M.GND
MOTOR12V
F-OFF
-35V
AC3.7V
BACK UP
*EA·ES·EV IDL9V
*EO ONLY IDL12V
V·IN
V·OUT
A·IN
A·OUT
TV CONT
FSC
SECAM
PBC
NC
C.SYNC
C.SWP
V.SYNC
2FSC
EDIT
EE·V
PICTURE
BV
CV
U
VT
VH
AGC
VL
AFT
MB
IF
TRP
REC SF
LED
ENCOD1
ENCOD2
ENCOD3
ENCOD4
LM -
LM +
FG
CM.CONT
F/R
DM.CONT
PG
PH1
ON2170 (Q, R)
D1 LN59AK
MODEL
*T1
EA V1084EK
ES V1084ES
EV V1084EV
EO V1084EOG
C1 0.0047/400AC (Z)
EXCEPT EOV
*FL1 LF-4N EOV ONLY
F1 T630mA 250V
F2 T2A 250V
D1 TO D8 1SR35-100A
*J2 EXCEPT EO
TR5 2SD1762 (E, F)
TR4 2SC3330 (T, U)
TR6 2SC3330 (T, U)
TR1 2SB891 (Q, R)
TR10 DTC143TS
IC2 BA15218
NJM2352D
TR8 DTA114ES
TR9 DTC143TS
TR7 2SA1286 (G, H, J)
*TR11 2SB1010 -T103 (R)
TR12 2SD-1292 (Q, R)
TR13 2SA1317 (T, U)
*R13 EA·ES·EV:2K (F) EO:1.8K (F)
*R14 EA·ES·EV:1.6K (F) EO:2.4K (F)
*L6 EO:100μH (K) EXCEPT EO:56μH (K)
*TR11 EO(V) ONLY:2SB891 (Q, R)
*C3 ES:1000/25 EXCEPT ES:470/25
*R18 EO:1W 1K (FS) EXCEPT EO:1K

INDICATE SAFETY CRITICAL
ENTS FOR CONTINUED SAFETY.
E SAFETY CRITICAL COMPONENTS
VITH MANUFACTURER'S RECOMMENDED

ET , ILS INDIQUENT LES
TANTS CRITIQUES DE SÉCURITÉ.
AINTENIR LE DEGRÉ DE SÉCURITÉ
PPAREIL, NE REMPLACER QUE DES
RECOMMANDEES PAR LE FABRICANT

	*TV TUNER	*RF CONVERTER
EA	TEMS1-005A	MDLK2S100A
ES	TEMZ1-011A	MDLK3B063A
EV	TEMD1-010A	MDLK2D103A
EO	TEME1-006A	MDLK-3D063A

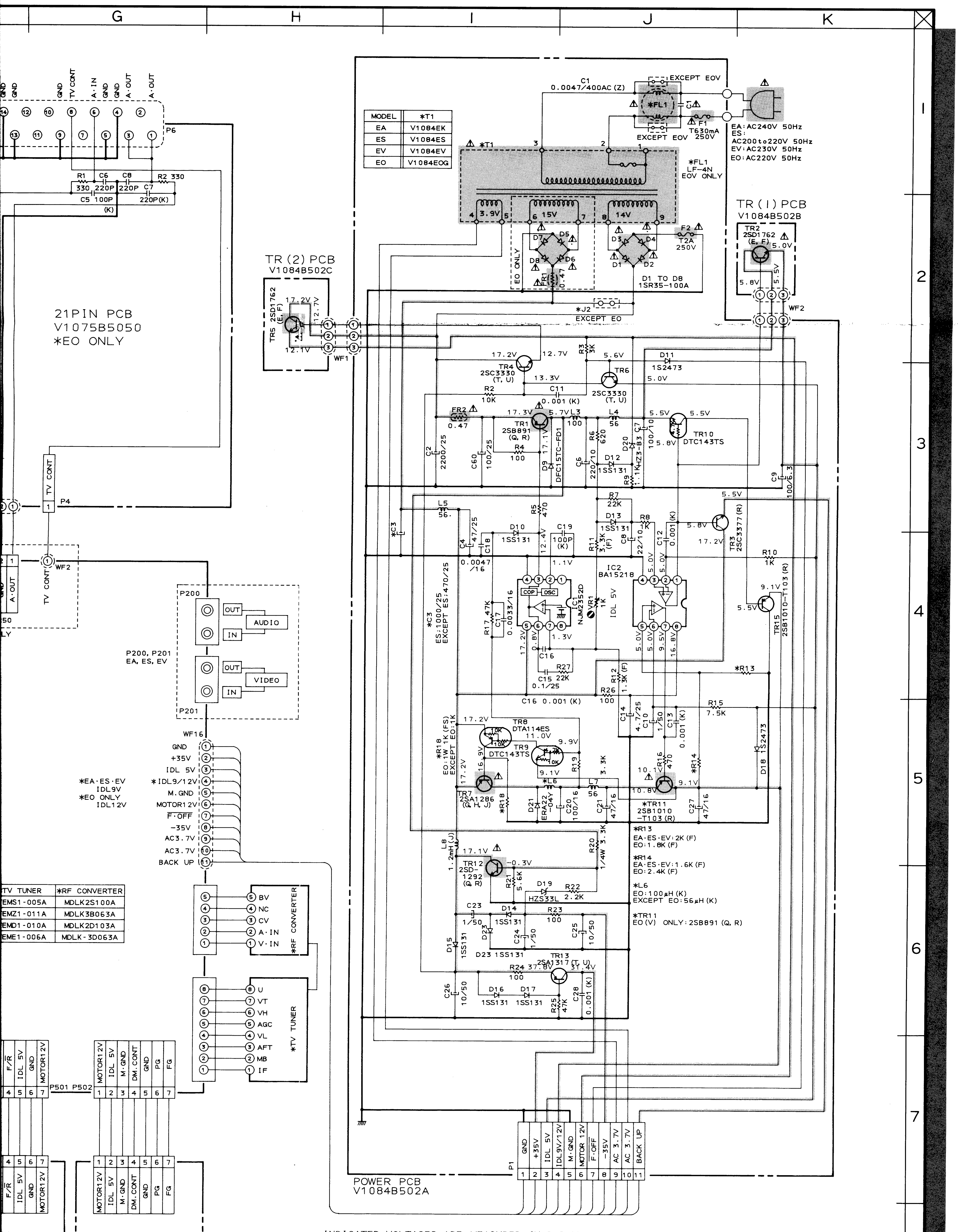
INDICATED VOLTAGES ARE MEASURED IN P.B.MODE.

NOTE
UNLESS OTHERWISE SPECIFIED;
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (M)
ALL INDUCTORS IN μH (K)
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

B (POWER SUPPLY) LINE

VS-20EO
VS-26EA
CONNECTI

NO.7-


G
H
I
J
K
1
2
3
4
5
6
7
8
P6
21PIN PCB
V1075B5050
*EO ONLY
TV CONT
P4
WF2
TR (2) PCB
V1084B502C
TR5 2SD1762 (E, F)
WF1
TR (1) PCB
V1084B502B
TR2 2SD1762 (E, F)
C1 0.0047/400AC (Z)
EXCEPT EOV
*FL1
F1 T630mA 250V
*FL1 LF-4N EOV ONLY
EA:AC240V 50Hz
ES:
AC200to220V 50Hz
EV:AC230V 50Hz
EO:AC220V 50Hz
*T1
F2 T2A 250V
D1 TO D8 1SR35-100A
*J2
EXCEPT EO
TR4 2SC3330 (T, U)
TR6 2SC3330 (T, U)
D11 1S2473
TR1 2SB891 (Q, R)
TR10 DTC143TS
D9 DFC15TC-FD1
IC2 BA15218
IC1 NJM2352D
TR3 2SC3377 (R)
TR15 2SB1010-T103 (R)
*C3 ES:1000/25 EXCEPT ES:470/25
TR8 DTA114ES
TR9 DTC143TS
TR7 2SA1286 (G, H, J)
*R18 EO:1W 1K (FS) EXCEPT EO:1K
*TR11 2SB1010 -T103 (R)
D18 1S2473
TR12 2SD-1292 (Q, R)
D19 HZS33L
TR13 2SA1317 (T, U)
P200
P201
AUDIO
VIDEO
OUT
IN
P200, P201 EA, ES, EV
WF16
GND
+35V
IDL 5V
*IDL9/12V
M.GND
MOTOR12V
F.OFF
-35V
AC3.7V
AC3.7V
BACK UP
*EA·ES·EV IDL9V
*EO ONLY IDL12V
*RF CONVERTER
BV
NC
CV
A·IN
V·IN
*TV TUNER
U
VT
VH
AGC
VL
AFT
MB
IF
P501 P502
DRUM MOTOR
SM-250
NO.002072
MOTOR PCB
M3225D5010
POWER PCB
V1084B502A
P1

MODEL	*T1
EA	V1084EK
ES	V1084ES
EV	V1084EV
EO	V1084EOG

TV TUNER	*RF CONVERTER
EMS1-005A	MDLK2S100A
EMZ1-011A	MDLK3B063A
EMD1-010A	MDLK2D103A
EME1-006A	MDLK-3D063A

*R13
EA·ES·EV: 2K (F)
EO: 1.8K (F)

*R14
EA·ES·EV: 1.6K (F)
EO: 2.4K (F)

*L6
EO: 100μH (K)
EXCEPT EO: 56μH (K)

*TR11
EO (V) ONLY: 2SB891 (Q, R)

INDICATED VOLTAGES ARE MEASURED IN P.B.MODE.

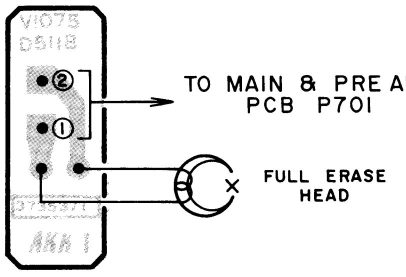
NOTE
UNLESS OTHERWISE SPECIFIED;
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (M)
ALL INDUCTORS IN μH (K)
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

B (POWER SUPPLY) LINE

VS-20EO
VS-26EA·ES·EV·EO
CONNECTION DIAGRAM

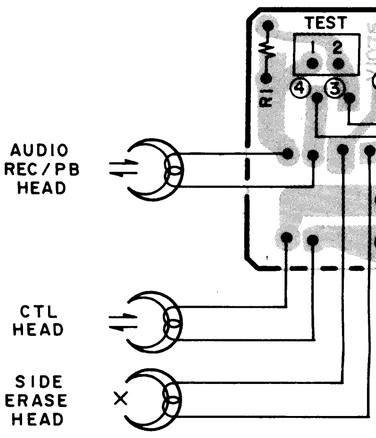
NO.7-1 V108421M
3

FULL ERASE HEAD PCB
V1075D511B

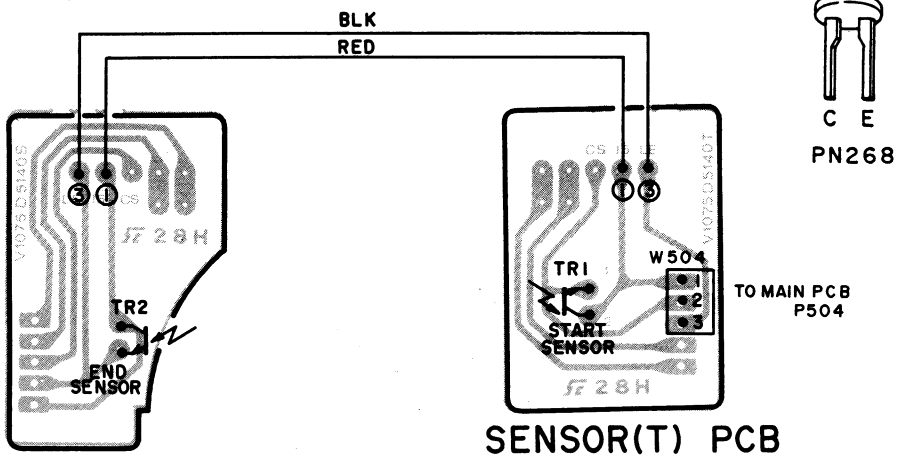


V1075
D511B
②
①
TO MAIN & PRE AMP
PCB P701
FULL ERASE
HEAD
3735371
AKK1

A/C HEAD
V1075D



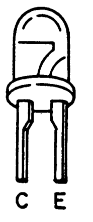
TEST
1 2
R1
④ ③
AUDIO
REC/PB
HEAD
CTL
HEAD
SIDE
ERASE
HEAD



BLK
RED
③ ①
V1075D5140S
CS
28H
TR2
END
SENSOR
CS
① ③
V1075D5140T
TR1
W504
1
2
3
START
SENSOR
28H
TO MAIN PCB
P504

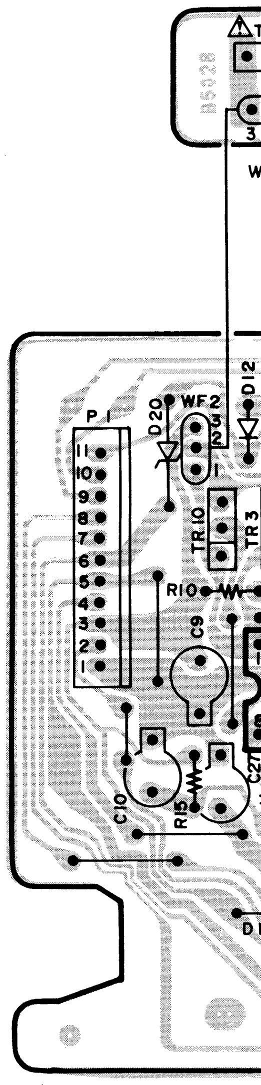
SENSOR(S) PCB
V1075D5140S

SENSOR(T) PCB
V1075D5140T



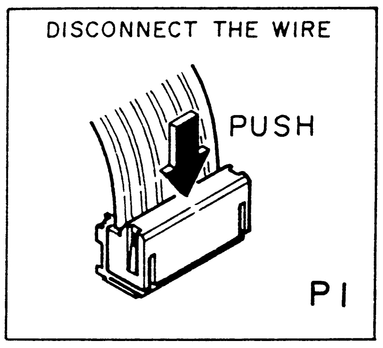
PN268

TR(1)
V1084

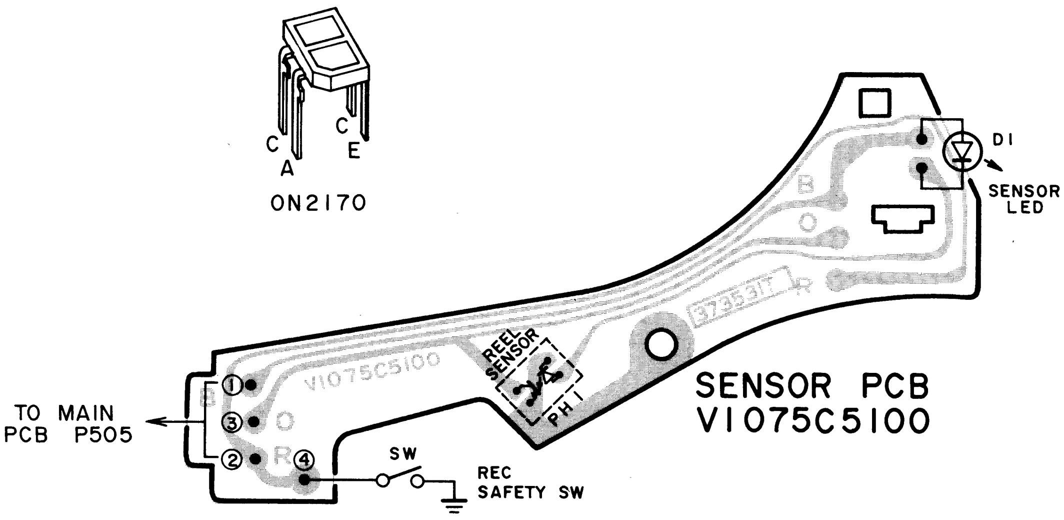


B5028
3
W
P1
11
10
9
8
7
6
5
4
3
2
1
D20
WF2
D12
TR10
TR3
R10
C9
C10
R15
C27
D1

POWER PCB



DISCONNECT THE WIRE
PUSH
P1



C
A
C
E

ON2170

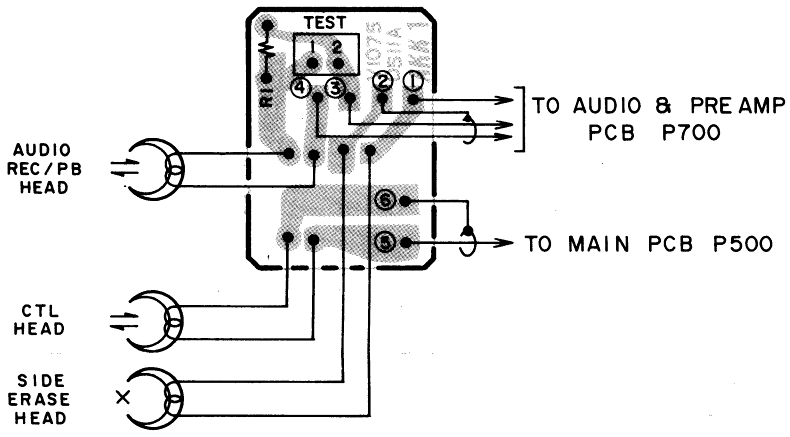
D1
SENSOR
LED
B
O
R
3735311
REEL
SENSOR
PH1
V1075C5100
TO MAIN
PCB P505
①
③
②
④
SW
REC
SAFETY SW

SENSOR PCB
V1075C5100

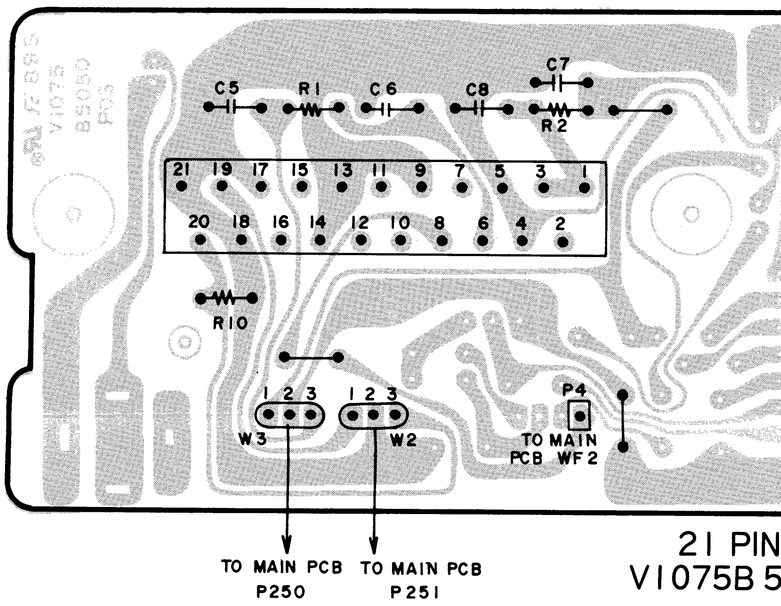
WARNING: ⚠INDICATES SAFETY CRI
REPLACE SAFETY CRITICA
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES C
POUR MAINTENIR LE DEGI
NE REMPLACER QUE DES

A/C HEAD PCB
V1075D511A



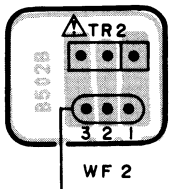
TEST
1
2
R1
④
③
②
①
⑥
⑤
TO AUDIO & PRE AMP PCB P700
TO MAIN PCB P500
AUDIO REC/PB HEAD
CTL HEAD
SIDE ERASE HEAD



C5
R1
C6
C8
C7
R2
21 19 17 15 13 11 9 7 5 3 1
20 18 16 14 12 10 8 6 4 2
R10
1 2 3
W3
1 2 3
W2
P4
TO MAIN PCB WF2
TO MAIN PCB P250
TO MAIN PCB P251

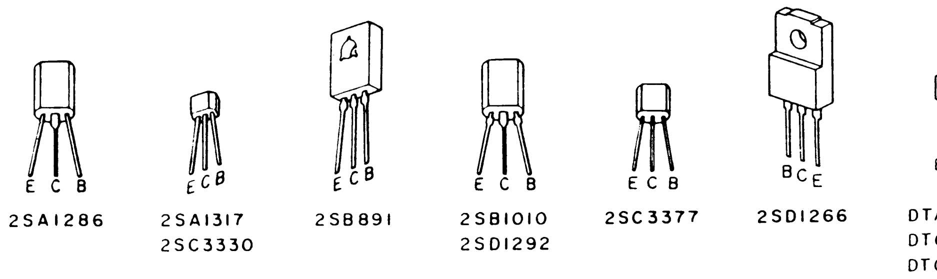
21 PIN
V1075B5

TR(1) PCB
V1084B502B(J3)

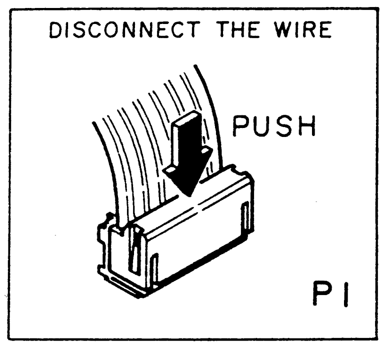


⚠TR2
B502B
3 2 1
WF 2

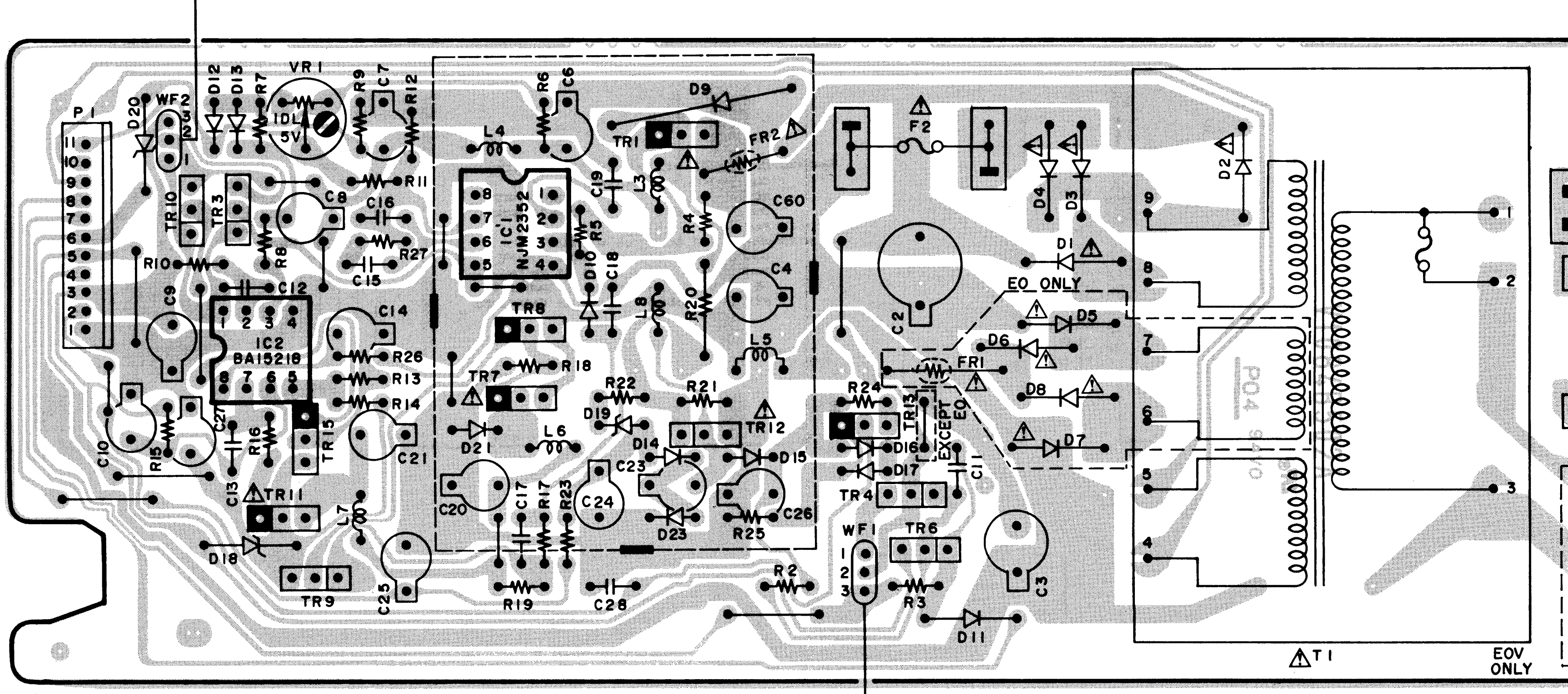
TR 1 ---- 2SB891
TR2,5 --- 2SD1266
TR 3 ---- 2SC3377
TR4,6 --- 2SC3330
TR 7 ---- 2SA1286
TR 8 ---- DTA114ES
TR 9 ---- DTC143XS
TR10 ---- DTC143TS
TR11,15 - 2SB1010
TR12 ---- 2SD1292
TR13 ---- 2SA1317



E C B
2SA1286
E C B
2SA1317
2SC3330
E C B
2SB891
E C B
2SB1010
2SD1292
E C B
2SC3377
B C E
2SD1266
DT
DT
DT



DISCONNECT THE WIRE
PUSH
P1

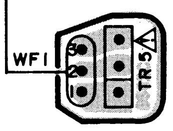


P1
D20
WF2
D12
D13
R7
VR1
IDL 5V
R9
C7
R12
L4
R6
C6
D9
TR1
FR2
F2
D4
D3
D2
TR10
TR3
C8
C16
R11
IC1 NJM2352
C19
L3
R4
C60
R10
R8
C12
C15
R27
R5
D10
C18
L8
R20
C4
D1
EO ONLY
C9
IC2 BA15218
C14
TR8
C2
D5
R26
R13
R14
R18
L5
D6
FR1
TR7
R22
R21
R24
D8
C27
R15
R16
TR15
D19
TR12
TR13
EXCEPT EO
C10
C21
D21
L6
D14
D15
D16
D17
D7
C13
TR11
C23
C26
TR4
C11
L7
C20
C17
R17
R23
C24
D23
R25
WF1
TR6
D18
TR9
C25
R19
C28
R2
R3
C3
D11
PO4
⚠T1
EOV ONLY
1
2
3
4
5
6
7
8
9

POWER PCB V1084B502A(J3)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

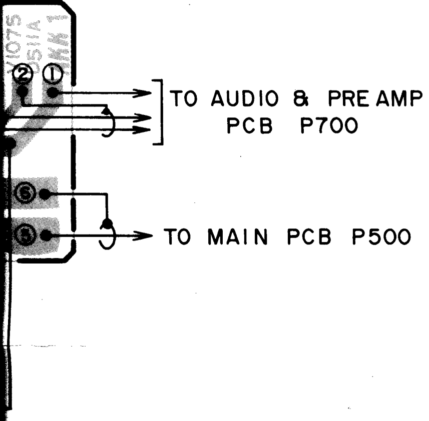


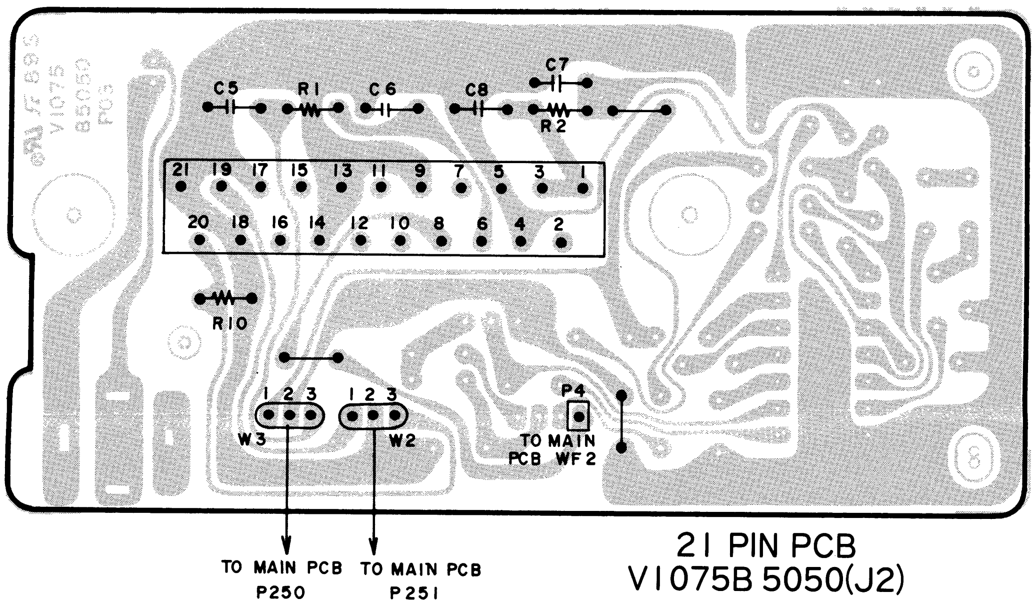
TR(2) PCB
V1084B502C(J3)

B
■●● = PNP TRANSISTOR

B
●●● = NPN TRANSISTOR

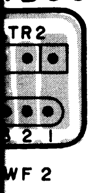
D PCB
511A


②
①
TO AUDIO & PREAMP PCB P700
TO MAIN PCB P500

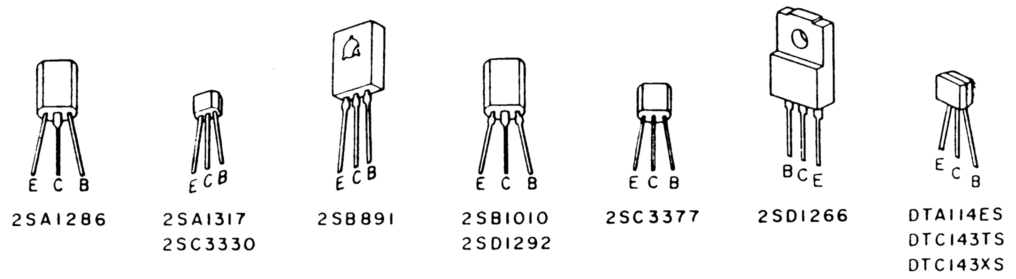

C5
R1
C6
C8
C7
R2
21 19 17 15 13 11 9 7 5 3 1
20 18 16 14 12 10 8 6 4 2
R10
1 2 3
W3
1 2 3
W2
P4
TO MAIN PCB WF2
TO MAIN PCB P250
TO MAIN PCB P251

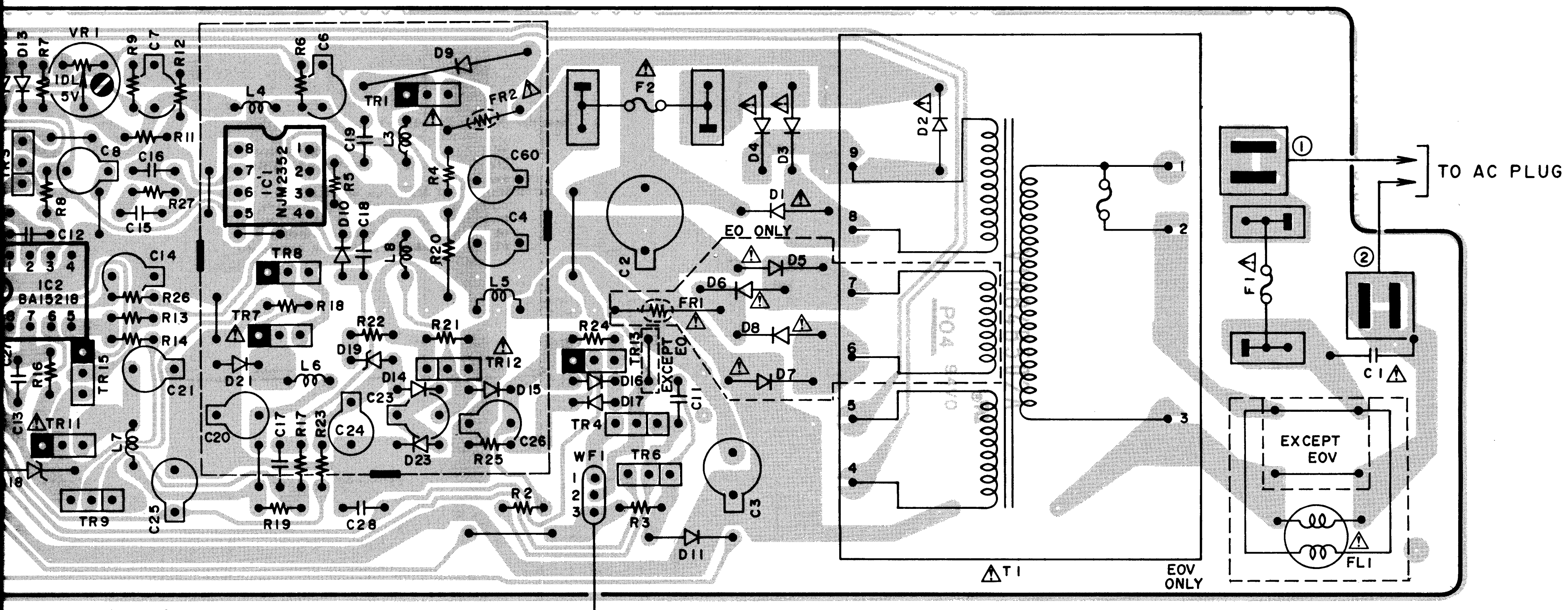
21 PIN PCB
V1075B 5050(J2)

PCB
4B502B(J3)



TR 1 ---- 2SB891
TR2,5 --- 2SD1266
TR 3 ---- 2SC3377
TR4,6 --- 2SC3330
TR 7 ---- 2SA1286
TR 8 ---- DTA114ES
TR 9 ---- DTC143XS
TR10 ---- DTC143TS
TR11,15 - 2SB1010
TR12 ---- 2SD1292
TR13 ---- 2SA1317

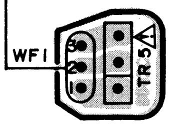

E C B
2SA1286
E C B
2SA1317
2SC3330
E C B
2SB891
E C B
2SB1010
2SD1292
E C B
2SC3377
B C E
2SD1266
E C B
DTA114ES
DTC143TS
DTC143XS


D13
R7
VR1
IDL
5V
R9
C7
R12
R6
C6
D9
L4
TR1
FR2
F2
D4
D3
D2
TO AC PLUG
①
②
R11
C8
C16
C19
L3
C60
R27
C15
IC1
NJM2352
R5
R4
D1
EO ONLY
C12
R8
C14
C4
D10
C18
L8
R20
C2
D5
9
8
7
6
5
4
1
2
3
IC2
BA15218
R26
R13
R14
TR8
R18
TR7
R22
R21
L5
R24
FR1
D6
D8
D7
F1
C1
TR15
C21
D21
L6
D19
D14
TR12
D15
TR13
EXCEPT EO
D16
D17
C11
C23
TR4
R16
TR11
L7
C20
C17
R17
R23
C24
D23
R25
C26
WF1
TR6
1
2
3
C3
R2
R3
D11
TR9
C25
R19
C28
T1
P04
EOV ONLY
EXCEPT EOV
FL1

V1084B502A(J3)

ITICAL COMPONENTS FOR CONTINUED SAFETY,
AL COMPONENTS ONLY WITH MANUFACTURER'S

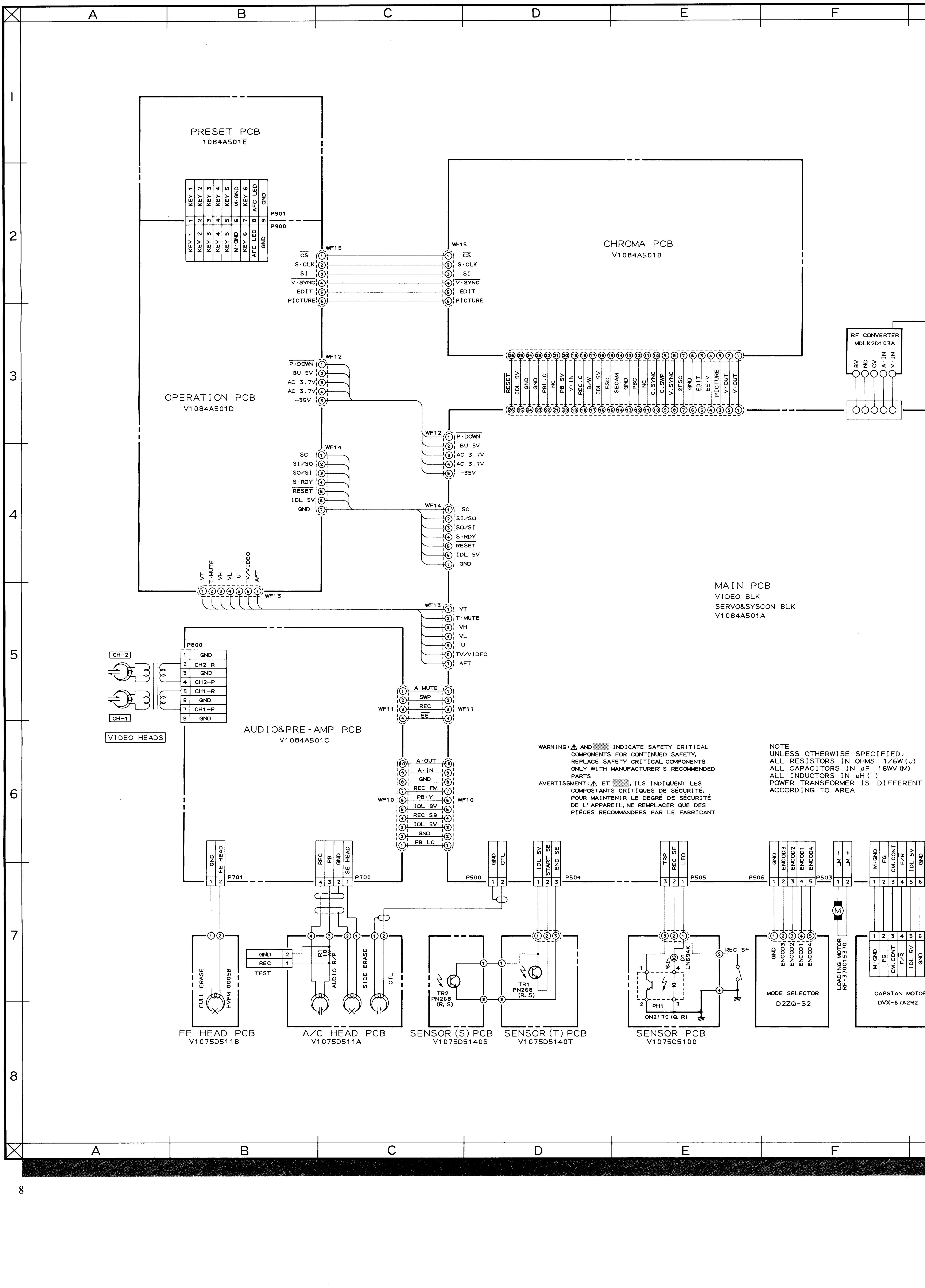
COMPOSANTS CRITIQUES DE SÉCURITÉ.
RÉ DE SÉCURITÉ DE L'APPAREIL,
PIÈCES RECOMMANDEES PAR LE FABRICANT



TR(2) PCB
V1084B502C(J3)

B
■ • • = PNP TRANSISTOR

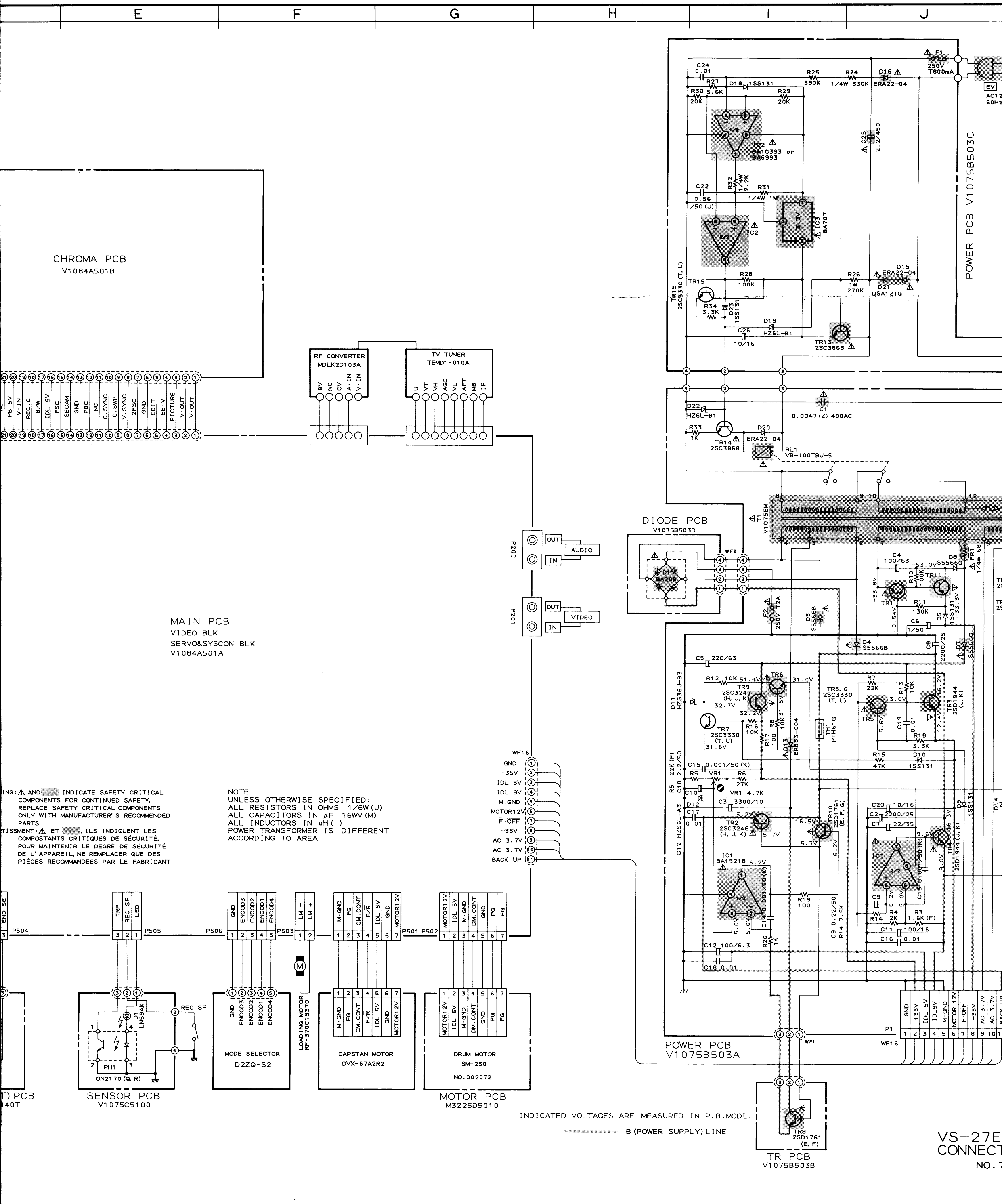
B
□ • • = NPN TRANSISTOR


PRESET PCB
1084A501E
KEY 1
KEY 2
KEY 3
KEY 4
KEY 5
M·GND
KEY 6
AFC LED
GND
P901
P900
OPERATION PCB
V1084A501D
WF15
CS
S·CLK
SI
V·SYNC
EDIT
PICTURE
WF12
P·DOWN
BU 5V
AC 3.7V
AC 3.7V
-35V
WF14
SC
SI/SO
SO/SI
S·RDY
RESET
IDL 5V
GND
VT
T·MUTE
VH
VL
U
TV/VIDEO
AFT
WF13
CHROMA PCB
V1084A501B
RESET
IDL 5V
GND
GND
PBL.C
NC
PB 5V
V·IN
REC.C
B/W
IDL 5V
FSC
SECAM
GND
PBC
NC
C.SYNC
V.SYNC
2FSC
GND
EDIT
EE·V
PICTURE
V·OUT
V·OUT
RF CONVERTER
MDLK2D103A
BV
NC
CV
A·IN
V·IN
MAIN PCB
VIDEO BLK
SERVO&SYSCON BLK
V1084A501A
P800
GND
CH2-R
GND
CH2-P
CH1-R
GND
CH1-P
GND
CH-2
CH-1
VIDEO HEADS
AUDIO&PRE-AMP PCB
V1084A501C
WF11
A·MUTE
SWP
REC
EE
WF10
A·OUT
A·IN
GND
REC FM
PB·Y
IDL 9V
REC S9
IDL 5V
GND
PB LC
P701
GND
FE HEAD
P700
REC
PB
GND
SE HEAD
P500
GND
CTL
P504
IDL 5V
START SE
END SE
P505
TRP
REC SF
LED
P506
GND
ENCOD3
ENCOD2
ENCOD1
ENCOD4
P503
LM -
LM +
M·GND
FG
CM.CONT
F/R
IDL 5V
GND
FULL ERASE
HVFM 00058
FE HEAD PCB
V1075D511B
GND
REC
TEST
R1
10
AUDIO R/P
SIDE ERASE
CTL
A/C HEAD PCB
V1075D511A
TR2
PN268
(R, S)
SENSOR (S) PCB
V1075D5140S
TR1
PN268
(R, S)
SENSOR (T) PCB
V1075D5140T
D1
LN59AK
REC SF
PH1
ON2170 (Q, R)
SENSOR PCB
V1075C5100
MODE SELECTOR
D2ZQ-S2
LOADING MOTOR
RF-370C15370
CAPSTAN MOTOR
DVX-67A2R2
A
B
C
D
E
F
1
2
3
4
5
6
7
8

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 16WV (M)
ALL INDUCTORS IN µH ( )
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA


E
F
G
H
I
J
CHROMA PCB
V1084A501B
RF CONVERTER
MDLK2D103A
BV NC CV A·IN V·IN
TV TUNER
TEMD1-010A
U VT VH AGC VL AFT MB IF
PB 5V V·IN REC.C B/W IDL 5V FSC SECAM GND PBC NC C.SYNC C.SWP V.SYNC 2FSC GND EDIT EE·V PICTURE V·OUT V·OUT
P200
OUT IN AUDIO
P201
OUT IN VIDEO
MAIN PCB
VIDEO BLK
SERVO&SYSCON BLK
V1084A501A
WF16
GND
+35V
IDL 5V
IDL 9V
M.GND
MOTOR12V
F·OFF
-35V
AC 3.7V
AC 3.7V
BACK UP
P504
END SE
P505
TRP REC SF LED
P506
GND ENCOD3 ENCOD2 ENCOD1 ENCOD4
P503
LM - LM +
P501
M·GND FG CM.CONT F/R IDL 5V GND MOTOR12V
P502
MOTOR12V IDL 5V M·GND DM.CONT GND PG FG
D1 LN59AK
REC SF
PH1
ON2170 (Q, R)
SENSOR PCB
V1075C5100
T) PCB
140T
MODE SELECTOR
D2ZQ-S2
LOADING MOTOR RF-370C15370
CAPSTAN MOTOR
DVX-67A2R2
DRUM MOTOR
SM-250
NO.002072
MOTOR PCB
M3225D5010
F1
250V T800mA
EV
AC12
60Hz
POWER PCB V1075B503C
C24 0.01
R27 5.6K
D18 1SS131
R30 20K
R29 20K
R25 390K
R24 1/4W 330K
D16 ERA22-04
IC2 BA10393 or BA6993
C25 2.2/450
C22 0.56 /50 (J)
R32 1/4W 2.2K
R31 1/4W 1M
IC3 BA707
3.5V
TR15 2SC3330 (T, U)
R28 100K
R26 1W 270K
D15 ERA22-04
D21 DSA12TG
R34 3.3K
D23 1SS131
D19 HZ6L-B1
C26 10/16
TR13 2SC3868
D22 HZ6L-B1
C1 0.0047(Z) 400AC
R33 1K
TR14 2SC3868
D20 ERA22-04
RL1 VB-100TBU-5
T1 V1075EM
DIODE PCB
V1075B503D
D1 BA20B
WF2
F2 250V T2A
D3 S5566B
C4 100/63
-53.0V
D8 S5566
FR1 1/4W 68
TR1
TR11
R10 100K
R11 130K
-33.8V
-0.54V
-33.3V
D5 1SS131
C6 1/50
D4 S5566B
C8 2200/25
D7 S5566G
C5 220/63
D11 HZS36J-B3
R12 10K
51.4V
TR6
31.0V
TR9 2SC3247 (H, J, K)
32.7V
32.2V
31.5V
R8 10K
TR7 2SC3330 (T, U)
31.6V
R16 10K
R17 100
D13 ERB83-004
TH1 PTH61G
TR5, 6 2SC3330 (T, U)
R7 22K
R13 10K
16.2V
13.0V
TR5
5.6V
C19 0.01
12.4V
TR3 2SD1944 (J, K)
R18 3.3K
R15 47K
D10 1SS131
R5 22K (F)
C10 2.2/50
C15 0.001/50 (K)
VR1
R6 27K
VR1 4.7K
C3 3300/10
D12 HZS6L-A3
C17 0.01
TR2 2SC3246 (H, J, K)
5.2V
5.7V
16.5V
TR10 2SD1761 (E, F, G)
6.2V
C20 10/16
C2 2200/25
C7 22/35
D9 1SS131
D14
9.6V
16.3V
IC1
9.0V
TR4 2SD1944 (J, K)
IC1 BA15218
6.2V
5.0V
C14 0.001/50 (K)
R19 100
C9 0.22/50
R14 7.5K
C13 0.001/50 (K)
C9
R4 2K
R14
R3 1.6K (F)
C11 100/16
C16 0.01
C12 100/6.3
R20 1K
C18 0.01
P1
GND +35V IDL 5V IDL9V M·GND MOTOR 12V F·OFF -35V AC 3.7V AC 3.7V BACK UP
WF16
WF1
POWER PCB
V1075B503A
TR8 2SD1761 (E, F)
TR PCB
V1075B503B
VS-27E
CONNECT
NO.7

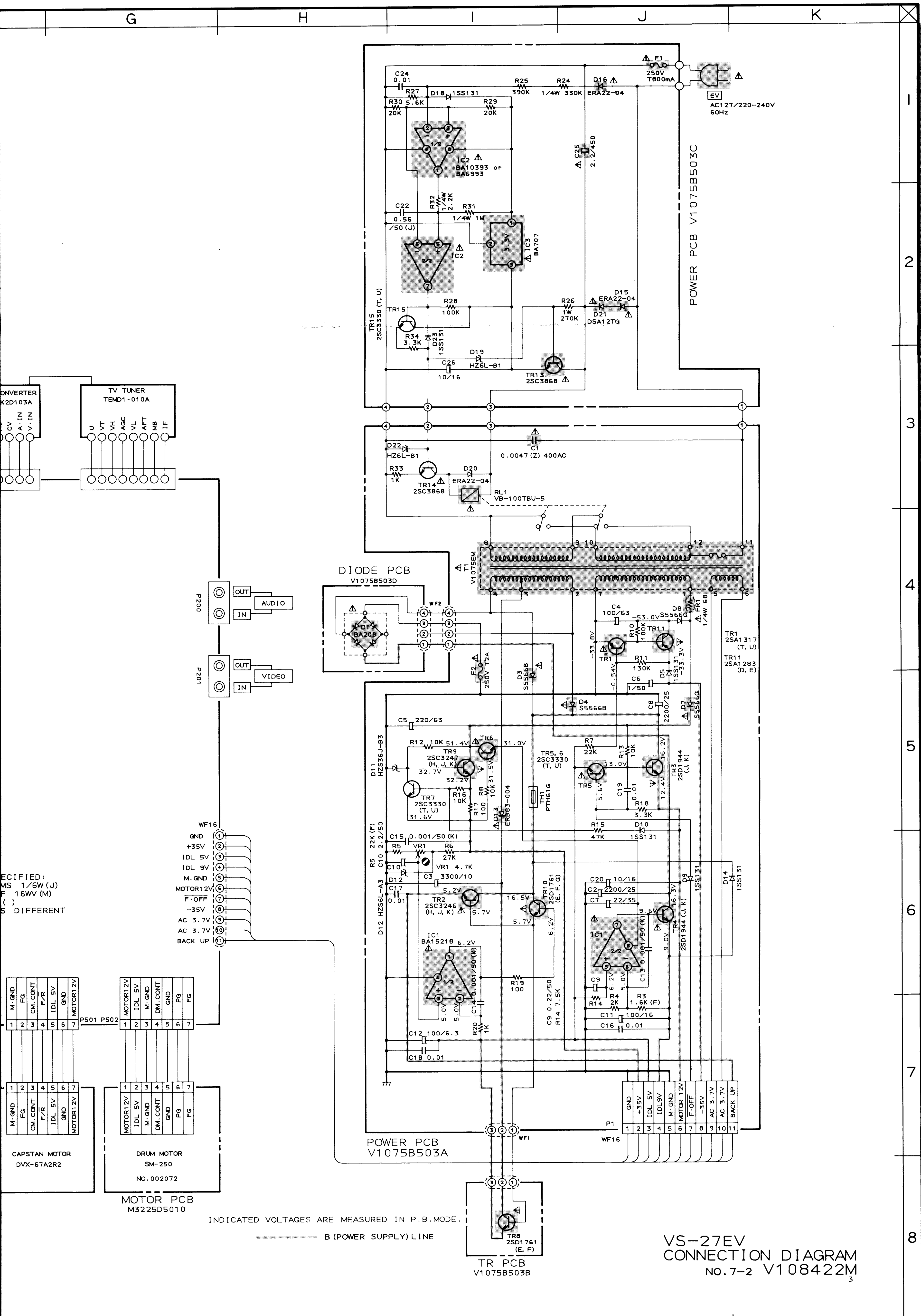
ING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

TISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED;
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 16WV (M)
ALL INDUCTORS IN μH ( )
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

INDICATED VOLTAGES ARE MEASURED IN P.B.MODE.

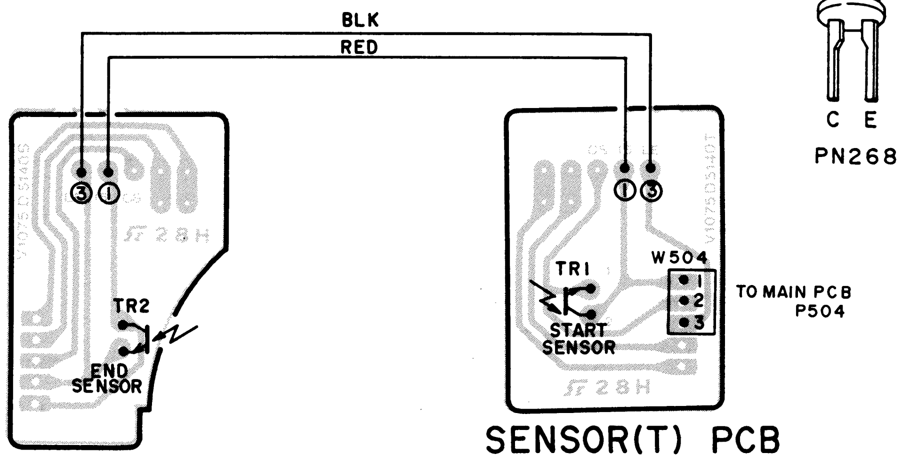
B (POWER SUPPLY) LINE


G
H
I
J
K
1
2
3
4
5
6
7
8
F1 250V T800mA
EV
AC127/220-240V 60Hz
C24 0.01
R27 5.6K
D18 1SS131
R25 390K
R24 1/4W 330K
D16 ERA22-04
R30 20K
R29 20K
IC2 BA10393 or BA6993
C25 2.2/450
POWER PCB V1075B503C
C22 0.56 /50 (J)
R32 1/4W 2.2K
R31 1/4W 1M
IC3 BA707
3.3V
IC2
TR15 2SC3330 (T, U)
R28 100K
R26 1W 270K
D15 ERA22-04
D21 DSA12TG
R34 3.3K
D23 1SS131
D19 HZ6L-B1
C26 10/16
TR13 2SC3868
CONVERTER
K2D103A
CV
A.IN
V.IN
TV TUNER
TEMD1-010A
U
VT
VH
AGC
VL
AFT
MB
IF
D22 HZ6L-B1
R33 1K
TR14 2SC3868
D20 ERA22-04
C1 0.0047 (Z) 400AC
RL1 VB-100TBU-5
T1 V1075EM
DIODE PCB
V1075B503D
D1 BA20B
WF2
P200
OUT
IN
AUDIO
P201
OUT
IN
VIDEO
C4 100/63
-53.0V
D8 S5566G
FR1 1/4W 68
-33.8V
R10 100K
TR11
TR1
R11 130K
-33.3V
D5 1SS131
-0.54V
TR1 2SA1317 (T, U)
TR11 2SA1283 (D, E)
F2 250V T2A
D3 S5566B
C6 1/50
D4 S5566B
C8 2200/25
D7 S5566G
C5 220/63
R12 10K
51.4V
TR6
31.0V
TR9 2SC3247 (H, J, K)
32.7V
32.2V
31.5V
D11 HZS36J-B3
TR7 2SC3330 (T, U)
31.6V
R16 10K
R8 10K
R17 100
D13 ERB83-004
TR5, 6 2SC3330 (T, U)
TH1 PTH61G
R7 22K
R13 10K
13.0V
16.2V
TR5
5.6V
C19 0.01
12.4V
TR3 2SD1944 (J, K)
R18 3.3K
R15 47K
D10 1SS131
WF16
GND
+35V
IDL 5V
IDL 9V
M.GND
MOTOR12V
F.OFF
-35V
AC 3.7V
AC 3.7V
BACK UP
ECIFIED;
MS 1/6W (J)
F 16WV (M)
( )
S DIFFERENT
C15 0.001/50 (K)
R5 22K (F)
C10 2.2/50
VR1
R6 27K
VR1 4.7K
C3 3300/10
D12
C17 0.01
D12 HZS6L-A3
5.2V
TR2 2SC3246 (H, J, K)
5.7V
16.5V
TR10 2SD1761 (E, F, G)
5.7V
6.2V
C20 10/16
C2 2200/25
C7 22/35
16.3V
D9 1SS131
D14 1SS131
IC1
9.6V
TR4 2SD1944 (J, K)
C13 0.001/50 (K)
9.0V
IC1 BA15218
6.2V
C14 0.001/50 (K)
R19 100
5.0V
5.0V
C9 0.22/50
R14 7.5K
C9
6.2V
5.0V
R4 2K
R3 1.6K (F)
R14
C11 100/16
C16 0.01
C12 100/6.3
R20 1K
C18 0.01
M.GND
FG
CM.CONT
F/R
IDL 5V
GND
MOTOR12V
P501
P502
MOTOR12V
IDL 5V
M.GND
DM.CONT
GND
PG
FG
1
2
3
4
5
6
7
GND
+35V
IDL 5V
IDL9V
M.GND
MOTOR 12V
F.OFF
-35V
AC 3.7V
AC 3.7V
BACK UP
P1
WF16
WF1
CAPSTAN MOTOR
DVX-67A2R2
DRUM MOTOR
SM-250
NO.002072
MOTOR PCB
M3225D5010
POWER PCB
V1075B503A
TR8 2SD1761 (E, F)
TR PCB
V1075B503B

INDICATED VOLTAGES ARE MEASURED IN P.B.MODE.

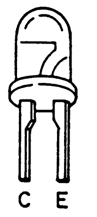
B (POWER SUPPLY) LINE

VS-27EV
CONNECTION DIAGRAM
NO.7-2 V108422M3

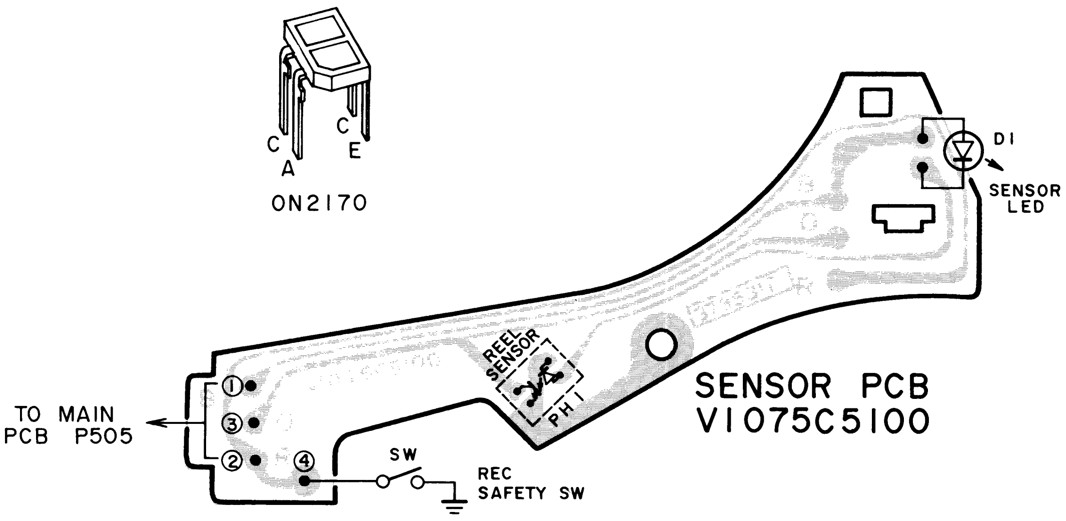

BLK
RED
③ ①
① ③
TR2
END SENSOR
TR1
START SENSOR
W504
1
2
3
TO MAIN PCB P504

SENSOR(S) PCB
V1075D5140S

SENSOR(T) PCB
V1075D5140T



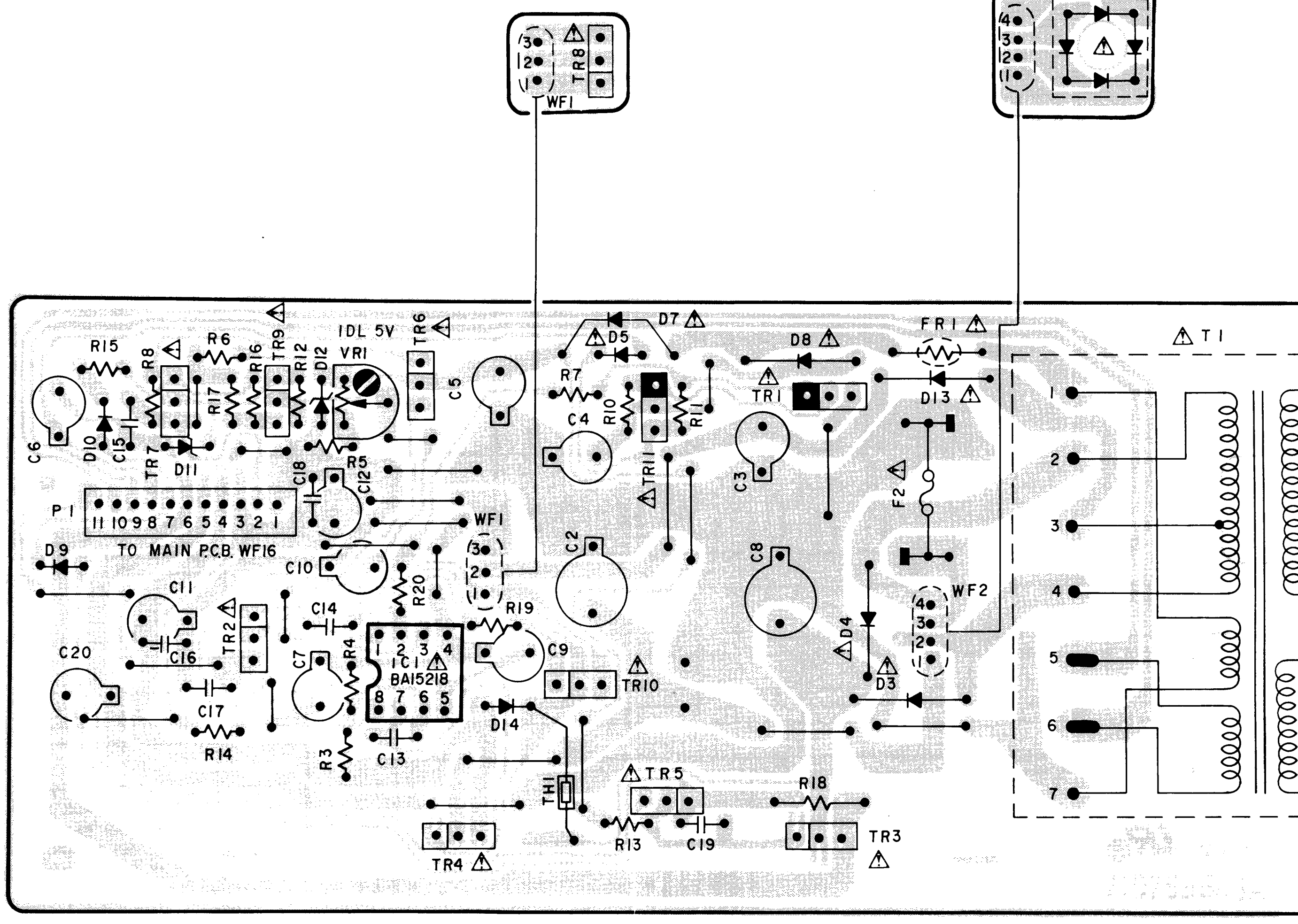
PN268


C
A
C
E

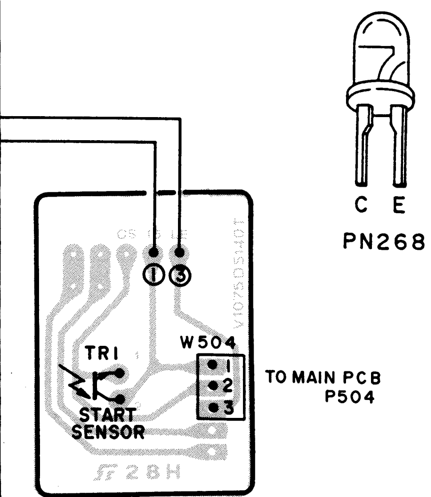
ON2170

D1
SENSOR LED
REEL SENSOR
PH1
TO MAIN PCB P505
①
③
②
④
SW
REC SAFETY SW

SENSOR PCB
V1075C5100

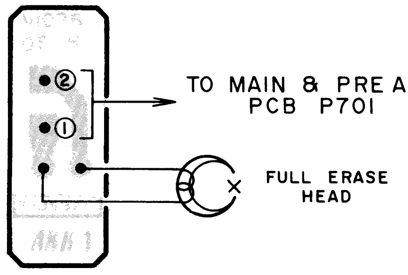

TR P.C.B.
V1075B503B
3
2
1
TR8
WF1
DIODE P.C.B.
V1075B503D
WF2
4
3
2
1
D1
R15
R8
R6
TR9
R16
R12
D12
IDL 5V
VR1
TR6
C5
D5
D7
D8
FR1
T1
C6
D10
C15
TR7
D11
R17
R5
C18
C12
R7
C4
R10
TR11
R11
TR1
D13
C3
F2
1
2
3
4
5
6
7
P1
11 10 9 8 7 6 5 4 3 2 1
TO MAIN PCB WF16
D9
C10
WF1
C2
C8
C11
R20
R19
WF2
D4
C16
TR2
C14
IC1
BA15218
1 2 3 4
8 7 6 5
C9
TR10
D3
C20
C17
C7
R4
D14
R14
R3
C13
TH1
TR5
R18
R13
C19
TR3
TR4

POWER SUPPLY PCB V1075B503A (-

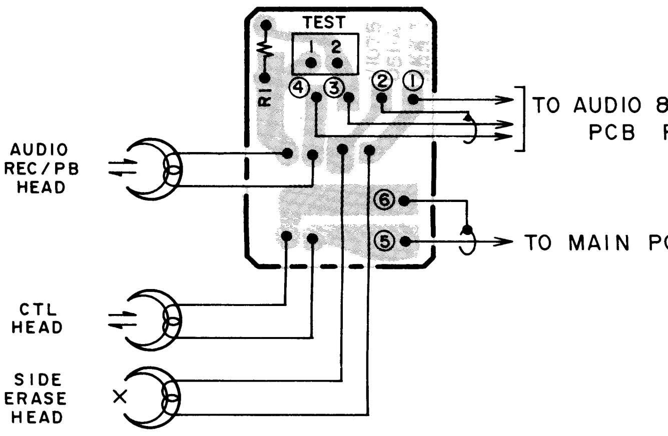

C E
PN268
①③
W504
TR1
START SENSOR
•1
•2
•3
TO MAIN PCB P504
28H

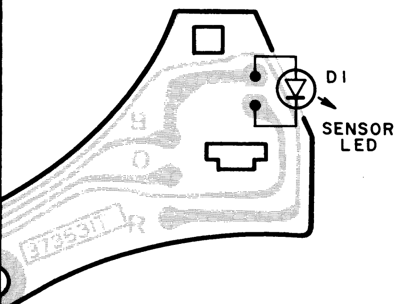
SENSOR(T) PCB
V1075D5140T

FULL ERASE HEAD PCB
V1075D511B


②
①
TO MAIN & PRE AMP PCB P701
FULL ERASE HEAD
AKK 1

A/C HEAD PCB
V1075D511A


TEST
1 2
R1
④ ③ ② ①
⑥
⑤
TO AUDIO 8
PCB P
TO MAIN P
AUDIO REC/PB HEAD
CTL HEAD
SIDE ERASE HEAD

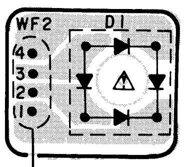

D1
SENSOR LED

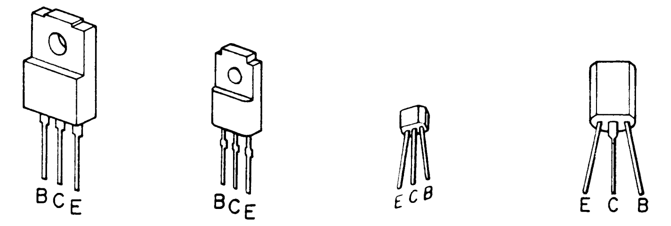
SENSOR PCB
V1075C5100

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SA
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTU
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICA

DIODE P.C.B.
V1075B503D




B C E
B C E
E C B
E C B

2SC3868
2SD1944

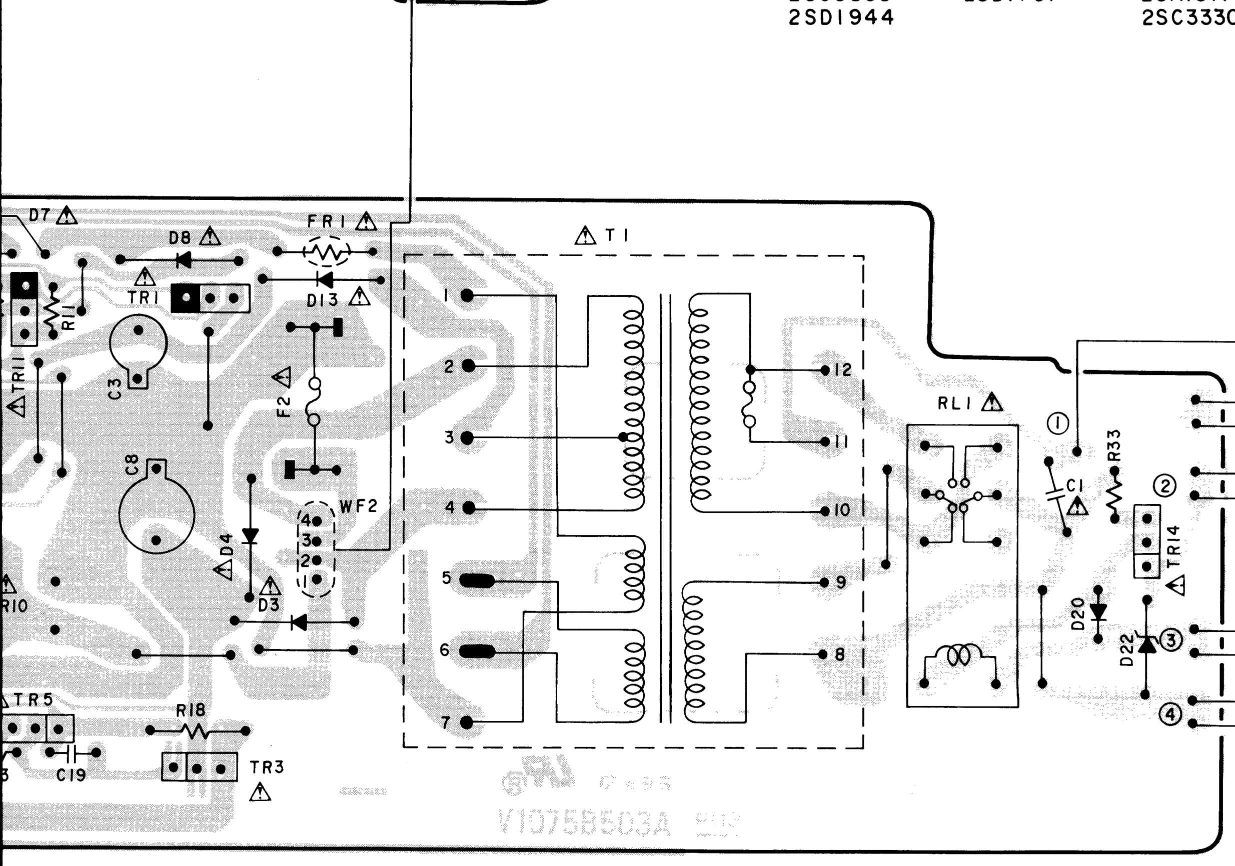
2SD1761

2SA1317
2SC3330

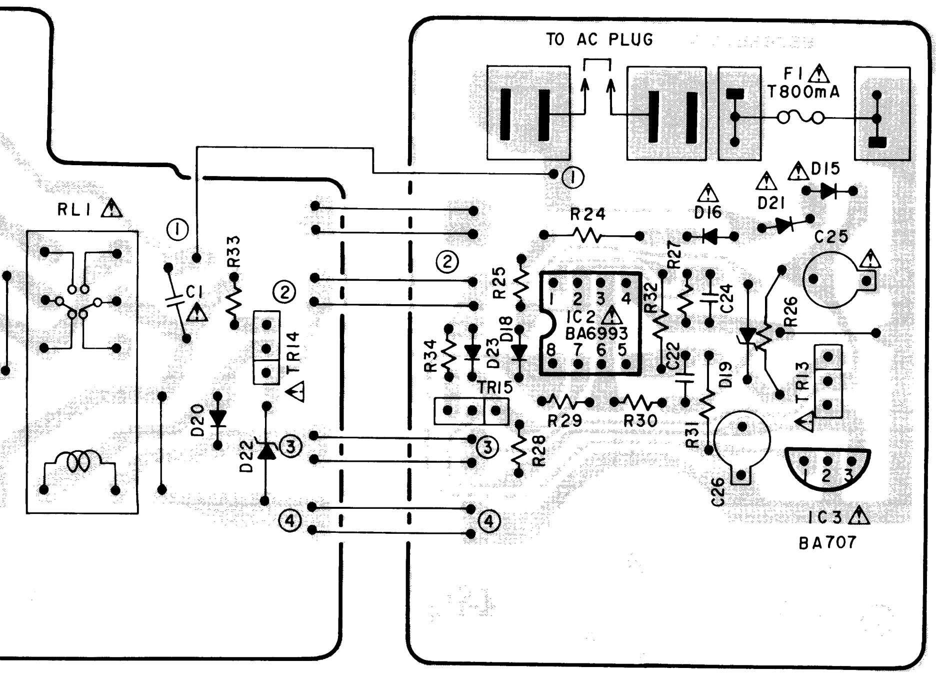
2SA1283
2SC3247

B
■•• = PNP TRANSISTOR

B
••• = NPN TRANSISTOR

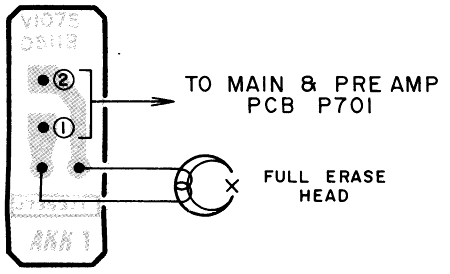

D7 ⚠
D8 ⚠
FR1 ⚠
⚠ T1
TR1
D13 ⚠
R11
TR11
C3
F2 ⚠
C8
WF2
D4
D3
R10
1
2
3
4
5
6
7
12
11
10
9
8
TR5
R18
C19
TR3 ⚠
V1075B503A

POWER SUPPLY PCB V1075B503A (-A)

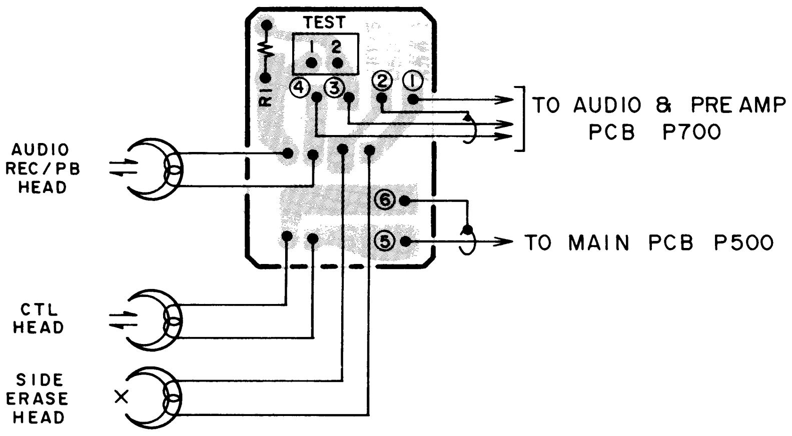

TO AC PLUG
F1 ⚠
T800mA
①
RL1 ⚠
C1
R33
②
TR14
D20
D22
③
④
R24
D16
D21
D15
C25
R25
R27
R32
C24
IC2 ⚠
BA6993
R34
D23
D18
TR15
C22
D19
R26
TR13
R29
R30
R28
R31
C26
IC3 ⚠
BA707

SW POWER PCB V1075B503C(-A)

FULL ERASE HEAD PCB
V1075D511B

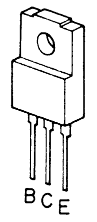

V1075
D511B
②
①
TO MAIN & PRE AMP PCB P701
FULL ERASE HEAD
AKK 1

A/C HEAD PCB
V1075D511A

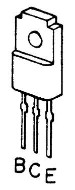

TEST
1 2
R1
④ ③ ② ①
TO AUDIO & PRE AMP PCB P700
AUDIO REC/PB HEAD
⑥
⑤
TO MAIN PCB P500
CTL HEAD
SIDE ERASE HEAD

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

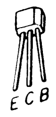
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



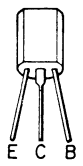
2SC3868
2SD1944



2SD1761



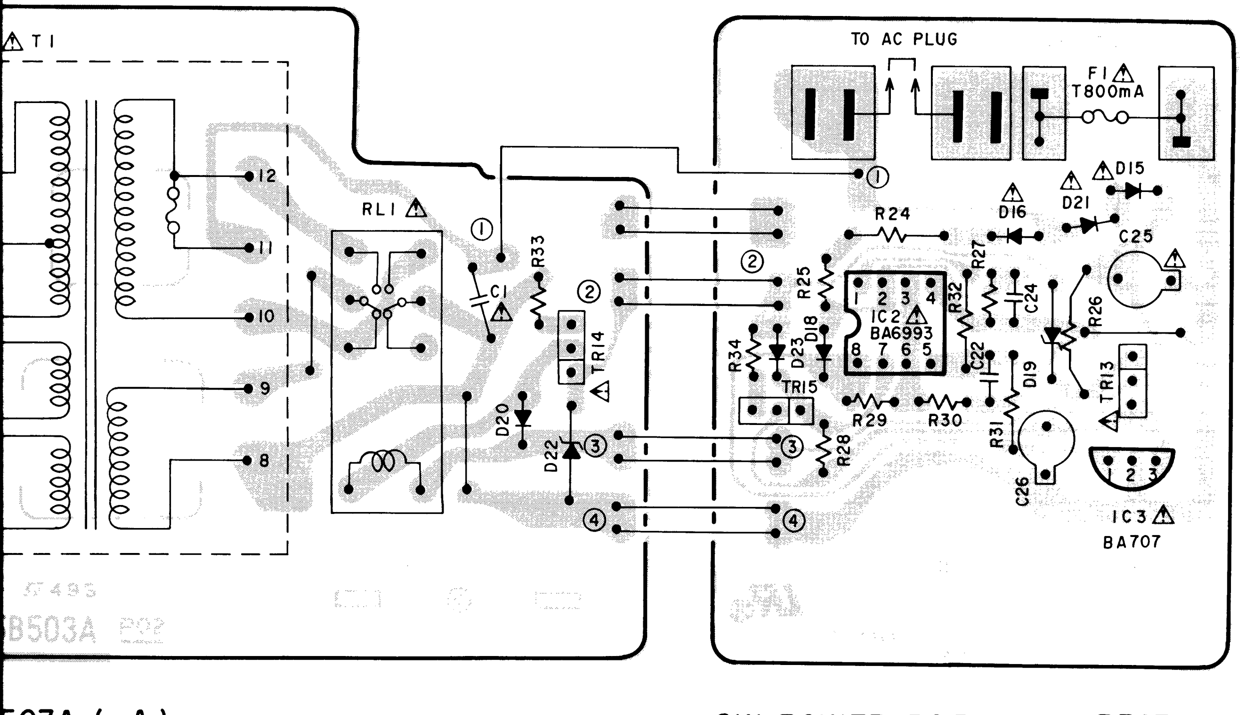
2SA1317
2SC3330



2SA1283
2SC3247

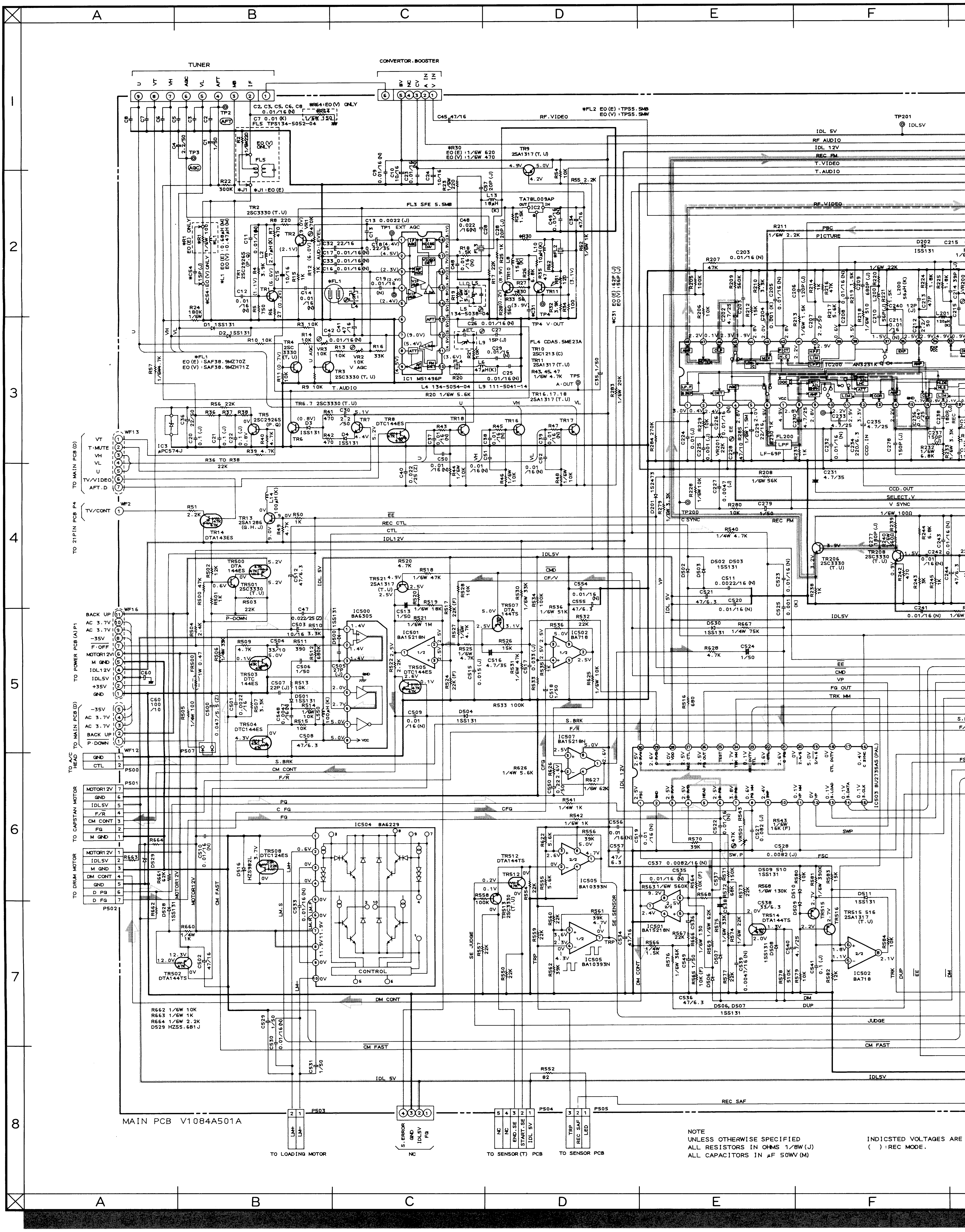
B ■•• = PNP TRANSISTOR

B ••• = NPN TRANSISTOR


⚠T1
12
11
10
9
8
RL1 ⚠
①
C1 ⚠
R33
②
TRI4 ⚠
D20
D22
③
④
B503A
TO AC PLUG
F1 ⚠ T800mA
⚠D15
D21 ⚠
D16 ⚠
R24
R27
C25 ⚠
R25
IC2 ⚠ BA6993
R32
C24
R26
R34
D23
D18
C22
D19
TRI3
TRI5
R29
R30
R28
R31
C26
IC3 ⚠ BA707

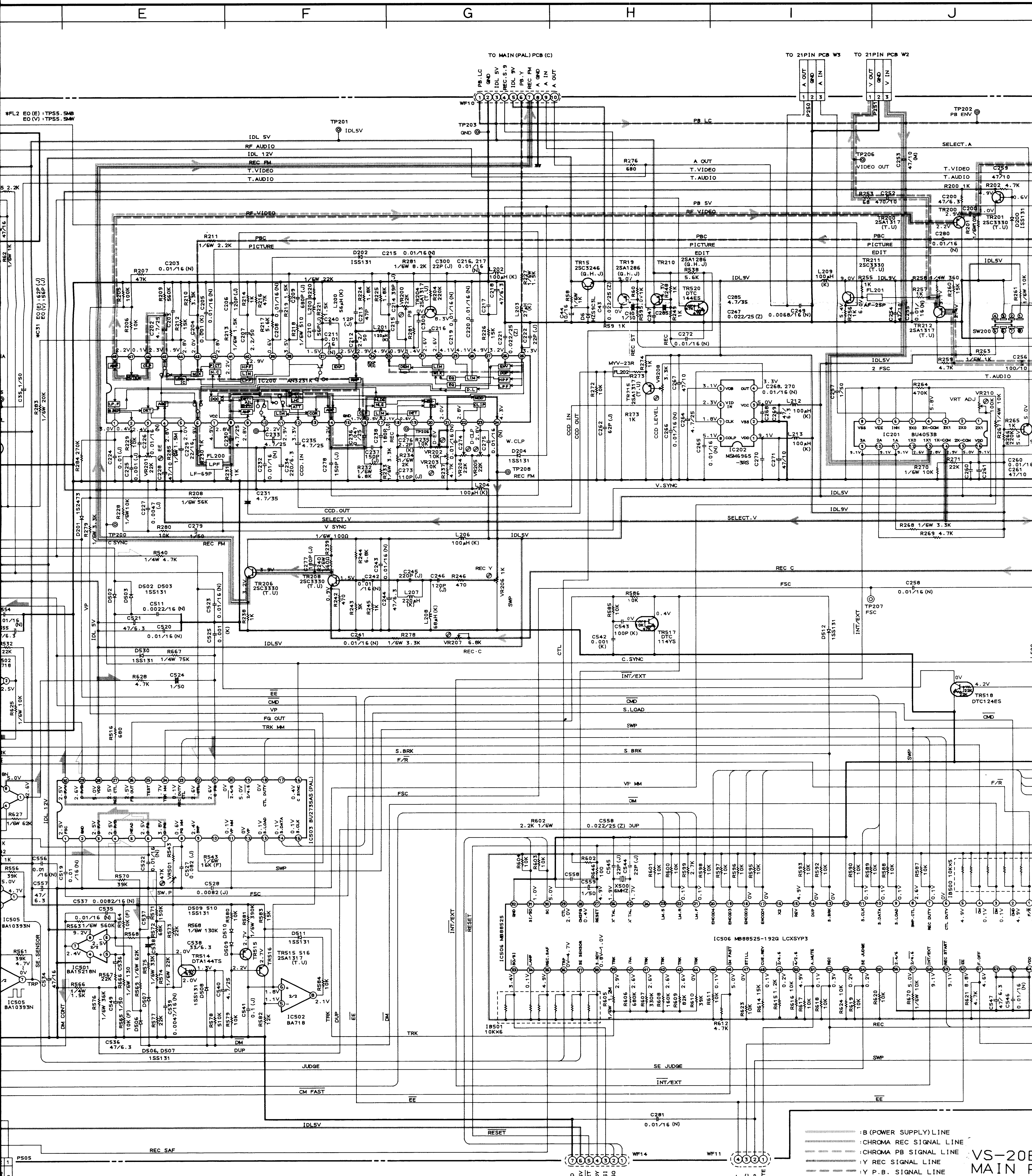
503A (-A)

SW POWER PCB V1075B503C(-A)


TUNER
CONVERTOR.BOOSTER
MAIN PCB V1084A501A
IC1 MS1496P
IC2 TA78L009AP
IC200 AN3231K
IC500 BA6305
IC501 BA15218N
IC502 BA718
IC503 BU2735AS (PAL)
IC504 BA6229
IC505 BA10393N
IC507 BA15218N
TO MAIN PCB (D)
TO 21PIN PCB P4
TO POWER PCB (A) P1
TO A/C HEAD
TO CAPSTAN MOTOR
TO DRUM MOTOR
TO LOADING MOTOR
NC
TO SENSOR (T) PCB
TO SENSOR PCB
R662 1/6W 10K
R663 1/6W 1K
R664 1/6W 2.2K
D529 HZS5.6B1J

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF 50WV (M)

INDICSTED VOLTAGES ARE
( ) : REC MODE.


E
F
G
H
I
J
TO MAIN (PAL) PCB (C)
PB LC
GND
IDL 5V
REC.S.9
IDL 9V
PB.Y
REC FM
A GND
A OUT
WF10
TO 21PIN PCB W3
TO 21PIN PCB W2
A OUT
GND
A IN
V OUT
GND
V IN
P250
P251
TP201
IDL5V
TP203
GND
TP202
PB ENV
TP206
VIDEO OUT
IDL 5V
RF AUDIO
IDL 12V
REC FM
T.VIDEO
T.AUDIO
RF.VIDEO
PB 5V
PBC
PICTURE
EDIT
SELECT.A
A OUT
#FL2 EO(E):TPS5.5MB
EO(V):TPS5.5MW
#C31 EO(E):62P(J)
EO(V):56P(J)
IC200
AN3231K
IC201
BU4053B
IC202
MSM6965
-3RS
TR15
2SC3246
TR19
2SA1286
TR210
2SA1286
TR520
DTC
144ES
TR200
2SA1317
TR201
2SC3330
TR211
2SC3330
TR212
2SA1317
TR206
2SC3330
TR208
2SC3330
TR517
DTC
114YS
TR518
DTC124ES
TR514
DTA144TS
TR515 516
2SA1317
FL200
LF-69P
FL201
AF-25P
FL202
MYV-23R
X500
6MHZ
VRT ADJ
VR210
SW200
W.CLP
TP208
REC FM
TP200
C SYNC
CCD.OUT
SELECT.V
V SYNC
REC FM
REC Y
REC C
FSC
TP207
FSC
REC-C
CCD LEVEL
CCD IN
CCD OUT
V.SYNC
IDL5V
IDL9V
SELECT.V
C.SYNC
INT/EXT
EE
CMD
VP
FG OUT
TRK MM
S.LOAD
SWP
S.BRK
F/R
VP MM
DM
FSC
DUP
IC503 BU2735AS (PAL)
IC506 MB88525
IC506 MB88525-192G LCXSYP3
IB500 10KX5
IB501
10KX6
IC501
BA15218N
IC505
BA10393N
IC502
BA718
SE.SENSOR
DM CONT
TRK
DUP
JUDGE
CM FAST
IDL5V
RESET
REC SAF
SE JUDGE
INT/EXT
P505
LED
SOR PCB
WF14
WF11
GND
IDL5V
RESET
S.RDY
SO/S1
S1/SO
SC
TO MAIN (D) PCB WF14
EE
REC
SWP
A.MUTE
TO MAIN (C) PCB WF11
C281
0.01/16 (N)

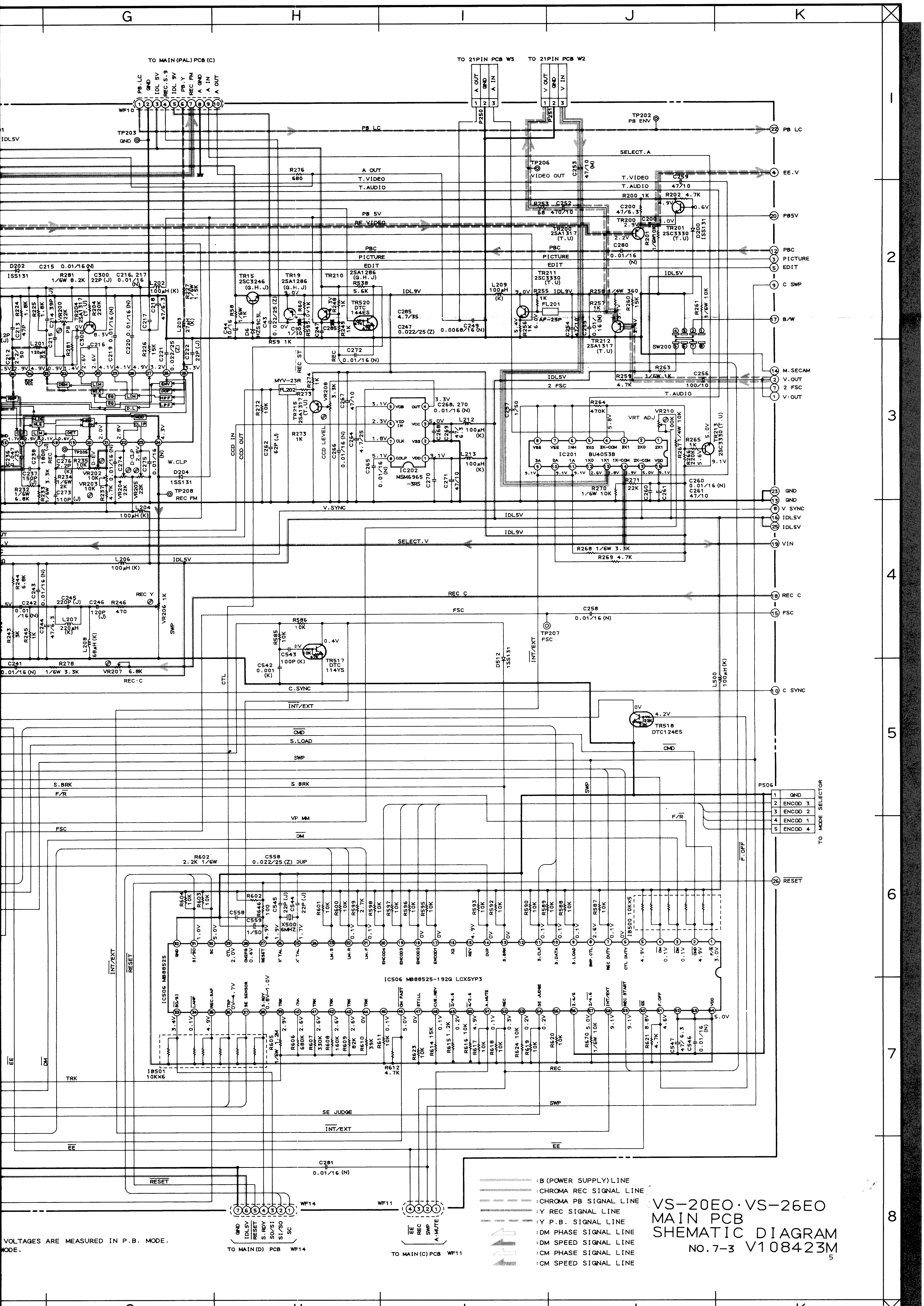
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN µF 50WV (M)

INDICSTED VOLTAGES ARE MEASURED IN P.B. MODE.
( ) :REC MODE.

:B (POWER SUPPLY) LINE
:CHROMA REC SIGNAL LINE
:CHROMA PB SIGNAL LINE
:Y REC SIGNAL LINE
:Y P.B. SIGNAL LINE
:DM PHASE SIGNAL LINE
:DM SPEED SIGNAL LINE
:CM PHASE SIGNAL LINE
:CM SPEED SIGNAL LINE

VS-20E
MAIN P
SHEMAT
NO.

E F G H I J


G
H
I
J
K
1
2
3
4
5
6
7
8
TO MAIN (PAL) PCB (C)
TO 21PIN PCB W3
TO 21PIN PCB W2
PB LC
EE.V
PB5V
PBC
PICTURE
EDIT
C SWP
B/W
M.SECAM
V.OUT
2 FSC
V.OUT
GND
GND
V SYNC
IDL5V
IDL5V
VIN
REC C
FSC
C SYNC
RESET
P506
GND
ENCOD 3
ENCOD 2
ENCOD 1
ENCOD 4
TO MODE SELECTOR
IC201 BU4053B
IC202 MSM6965-3RS
IC506 MB88525-192G LCXSYP3
TR518 DTC124ES
TR517 DTC114YS
VRT ADJ
SW200
WF10
WF14
WF11
TO MAIN (D) PCB WF14
TO MAIN (C) PCB WF11

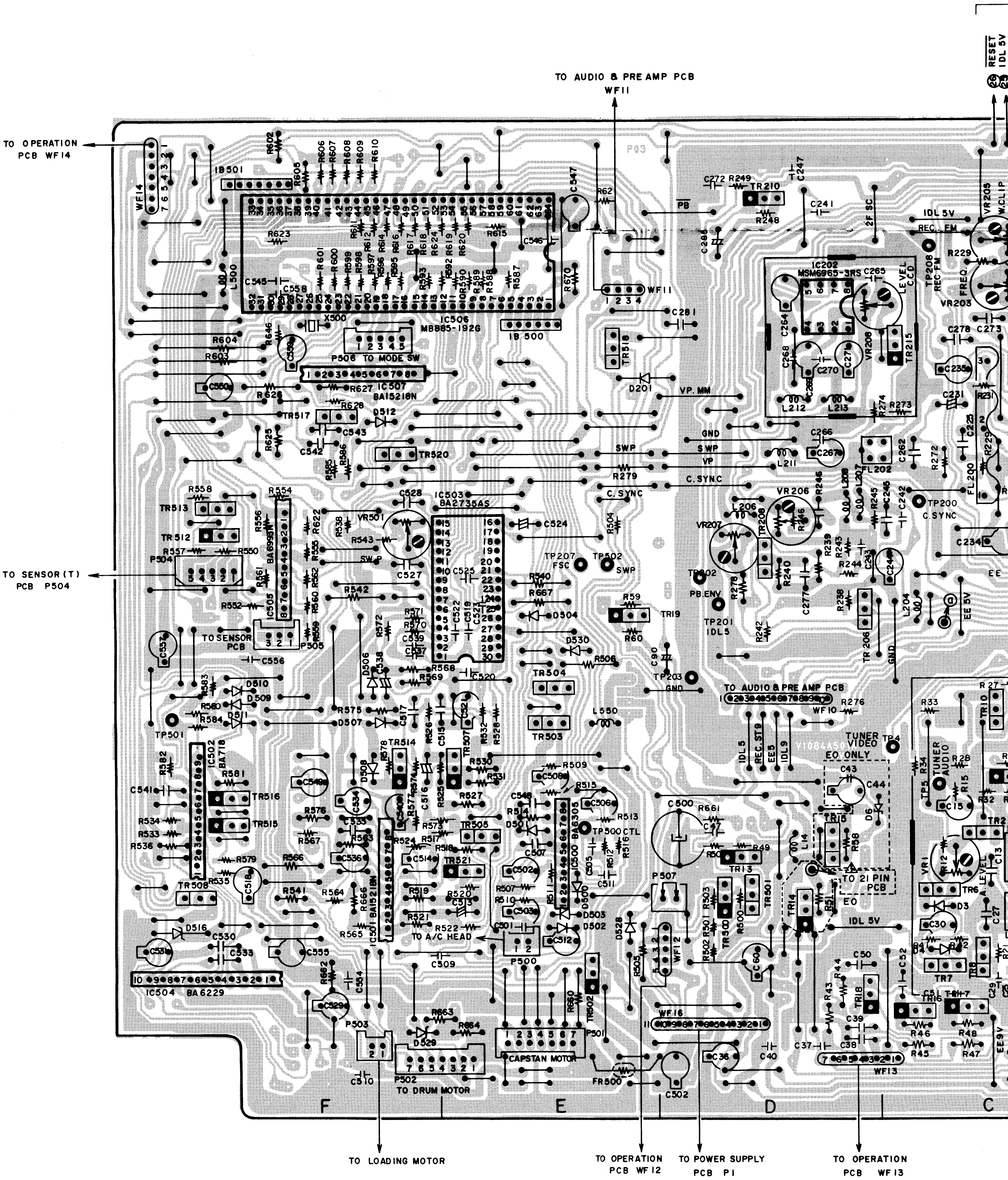
:B (POWER SUPPLY) LINE
:CHROMA REC SIGNAL LINE
:CHROMA PB SIGNAL LINE
:Y REC SIGNAL LINE
:Y P.B. SIGNAL LINE
:DM PHASE SIGNAL LINE
:DM SPEED SIGNAL LINE
:CM PHASE SIGNAL LINE
:CM SPEED SIGNAL LINE

VOLTAGES ARE MEASURED IN P.B. MODE.
ODE.

VS-20EO·VS-26EO
MAIN PCB
SHEMATIC DIAGRAM

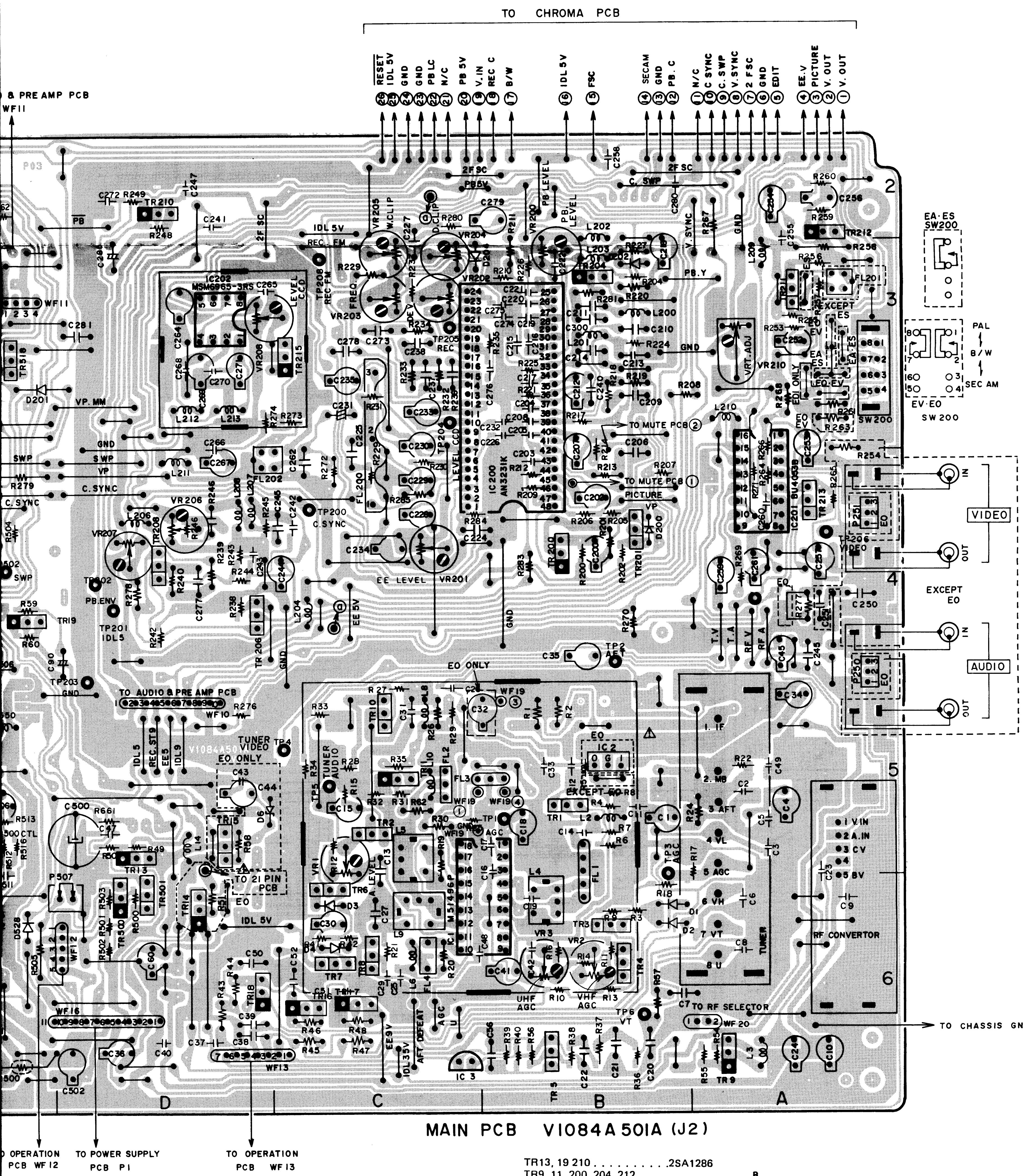
NO.7-3 V108423M

5


TO AUDIO & PRE AMP PCB
WF11
TO OPERATION PCB WF14
TO SENSOR (T) PCB P504
TO LOADING MOTOR
TO OPERATION PCB WF12
TO POWER SUPPLY PCB P1
TO OPERATION PCB WF13
RESET
IDL 5V
IC506 MB885-192G
IC507 BA15218N
IC503 BA2735AS
IC202 MSM6965-3RS
IC502 BA718
IC505 BA6993
IC504 BA6229
IC501 BA15218N
IC500 BA6305
P506 TO MODE SW
TO SENSOR PCB
P505
P500
P502 TO DRUM MOTOR
P503
P501
CAPSTAN MOTOR
TO A/C HEAD
TO AUDIO & PRE AMP PCB
WF10
TO 21 PIN PCB
EO ONLY
TUNER VIDEO
TUNER AUDIO
TP500 CTL
TP501
TP502 SWP
TP207 FSC
TP203 GND
TP202 PB.ENV
TP201 IDL5
TP200 C.SYNC
TP208 REC FM
SWP
VP
GND
C.SYNC
VP. MM
PB
2F SC
IDL 5V
REC. FM
FREQ.
LEVEL CCD
W.CLIP
EE 5V
EE9V
IB501
IB500
WF16
F
E
D
C

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


TO CHROMA PCB
RESET
IDL 5V
GND
GND
PB LC
N/C
PB 5V
V.IN
REC C
B/W
IDL 5V
FSC
SECAM
GND
PB. C
N/C
C SYNC
C. SWP
V. SYNC
2 FSC
GND
EDIT
EE.V
PICTURE
V. OUT
V. OUT
& PRE AMP PCB
WF11
IC202
MSM6965-3RS
IC200
AN3231K
IC201
TUNER
RF CONVERTOR
EE LEVEL
VRT. ADJ
TO MUTE PCB ②
TO MUTE PCB ①
VIDEO
AUDIO
IN
OUT
EXCEPT EO
EA·ES
SW200
PAL
B/W
SEC AM
EV·EO
SW 200
TO AUDIO & PRE AMP PCB
TO 21 PIN PCB
EO ONLY
EXCEPT EO
TO RF SELECTOR
TO CHASSIS GND
TO OPERATION PCB WF12
TO POWER SUPPLY PCB P1
TO OPERATION PCB WF13
A
B
C
D
2
3
4
5
6

MAIN PCB V1084A501A (J2)

PRINCIPAL PARTS LOCATION

ICS

IC1	B,C6
IC2	B5
IC3	C6
IC200	B3,4
IC201	A4
IC202	D3
IC500	E5,6
IC501	F5,6
IC502	F5
IC503	E4
IC504	F6
IC505	F4
IC506	E,F3
IC507	F3

CONNECTORS

P200	A4,5
P201	A4
P500	E6
P501	E6
P502	E,F6
P503	F6
P504	F4
P505	F4
P506	F3
P507	D6

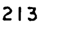
WIRES

WF10	D5
WF11	E3
WF12	D6
WF13	D,C6
WF14	F2
WF16	D6

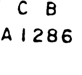
TR13, 19 210	2SA1286
TR9, 11, 200, 204, 212 215, 515, 516, 521	2SA1317
TR10	2SC1213
TR1, 5	2SC2926
TR2, 4, 6, 7, 201, 206, 208, 211, 213, 501, 513	2SC3330
TR500	DTA144ES
TR502, 507, 512, 514	DTA144TS
TR517	DTC114YS
TR508, 518	DTC124ES
TR8, 503, 504, 505, 520.	DTC144ES

B ■ ● ● = PNP TRANSISTOR

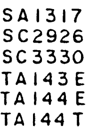
B □ ● ● = NPN TRANSISTOR



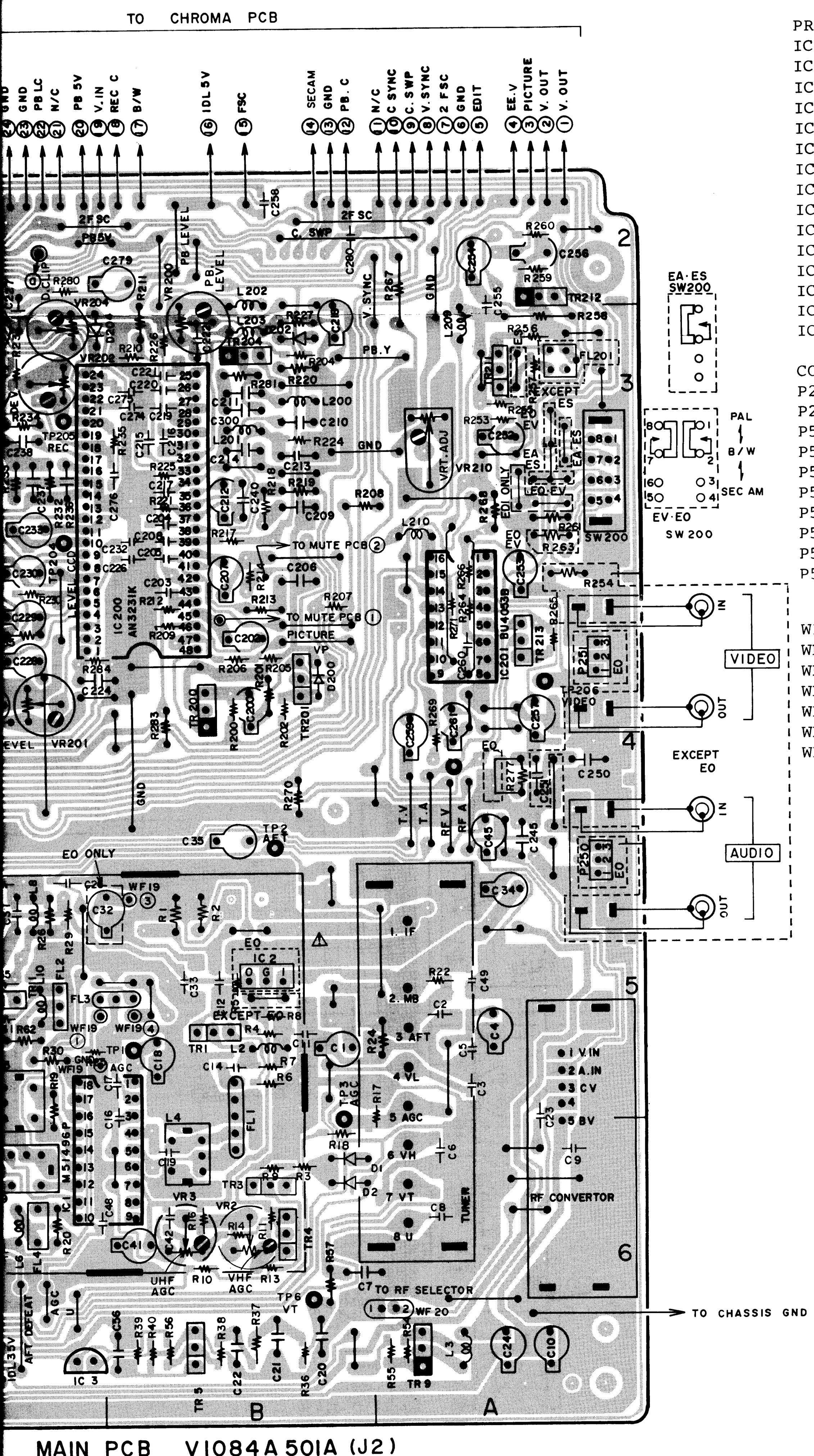
2SC1213



2SA1286



2SA1317
2SC2926
2SC3330
DTA143E
DTA144E
DTA144T
DTC114Y
DTC124E
DTC144E


TO CHROMA PCB
24 GND
23 GND
22 PB LC
21 N/C
20 PB 5V
19 V.IN
18 REC C
17 B/W
16 IDL 5V
15 FSC
14 SECAM
13 GND
12 PB. C
11 N/C
10 C SYNC
9 C. SWP
8 V.SYNC
7 2 FSC
6 GND
5 EDIT
4 EE.V
3 PICTURE
2 V. OUT
1 V. OUT
2
3
4
5
6
EA·ES
SW200
PAL
B/W
SEC AM
EV·EO
SW 200
EXCEPT ES
EA ES
EDI ONLY
LEQ·EV
VIDEO
IN
OUT
EXCEPT EO
AUDIO
IN
OUT
IC200 AN3231K
IC201 BU4053B
VRT. ADJ
TO MUTE PCB ②
TO MUTE PCB ①
PICTURE
VP
LEVEL
VR201
TP2 AFT
EO ONLY
IC 2
EXCEPT EO
1. IF
2. MB
3 AFT
4 VL
5 AGC
6 VH
7 VT
8 U
TUNER
1 V.IN
2 A.IN
3 CV
5 BV
RF CONVERTOR
TP3 AGC
UHF AGC
VHF AGC
TP6 VT
TO RF SELECTOR
WF 20
IC1 M51496P
IC 3
IDL 35V
AFT DEFEAT
AGC
TO CHASSIS GND
B
A

MAIN PCB V1084A501A (J2)

TRANSISTOR	TYPE
TR13, 19 210	2SA1286
TR9, 11, 200, 204, 212 215, 515, 516, 521	2SA1317
TR10	2SC1213
TR1, 5	2SC2926
TR2, 4, 6, 7, 201, 206, 208, 211, 213, 501, 513	2SC3330
TR500	DTA144ES
TR502, 507, 512, 514	DTA144TS
TR517	DTC114YS
TR508, 518	DTC124ES
TR8, 503, 504, 505, 520.	DTC144ES

B ■●● = PNP TRANSISTOR

B ●●● = NPN TRANSISTOR

PRINCIPAL PARTS LOCATION

ICS

IC	LOCATION
IC1	B,C6
IC2	B5
IC3	C6
IC200	B3,4
IC201	A4
IC202	D3
IC500	E5,6
IC501	F5,6
IC502	F5
IC503	E4
IC504	F6
IC505	F4
IC506	E,F3
IC507	F3

CONNECTORS

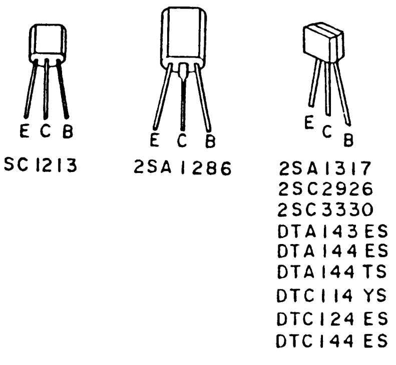
CONNECTOR	LOCATION
P200	A4,5
P201	A4
P500	E6
P501	E6
P502	E,F6
P503	F6
P504	F4
P505	F4
P506	F3
P507	D6

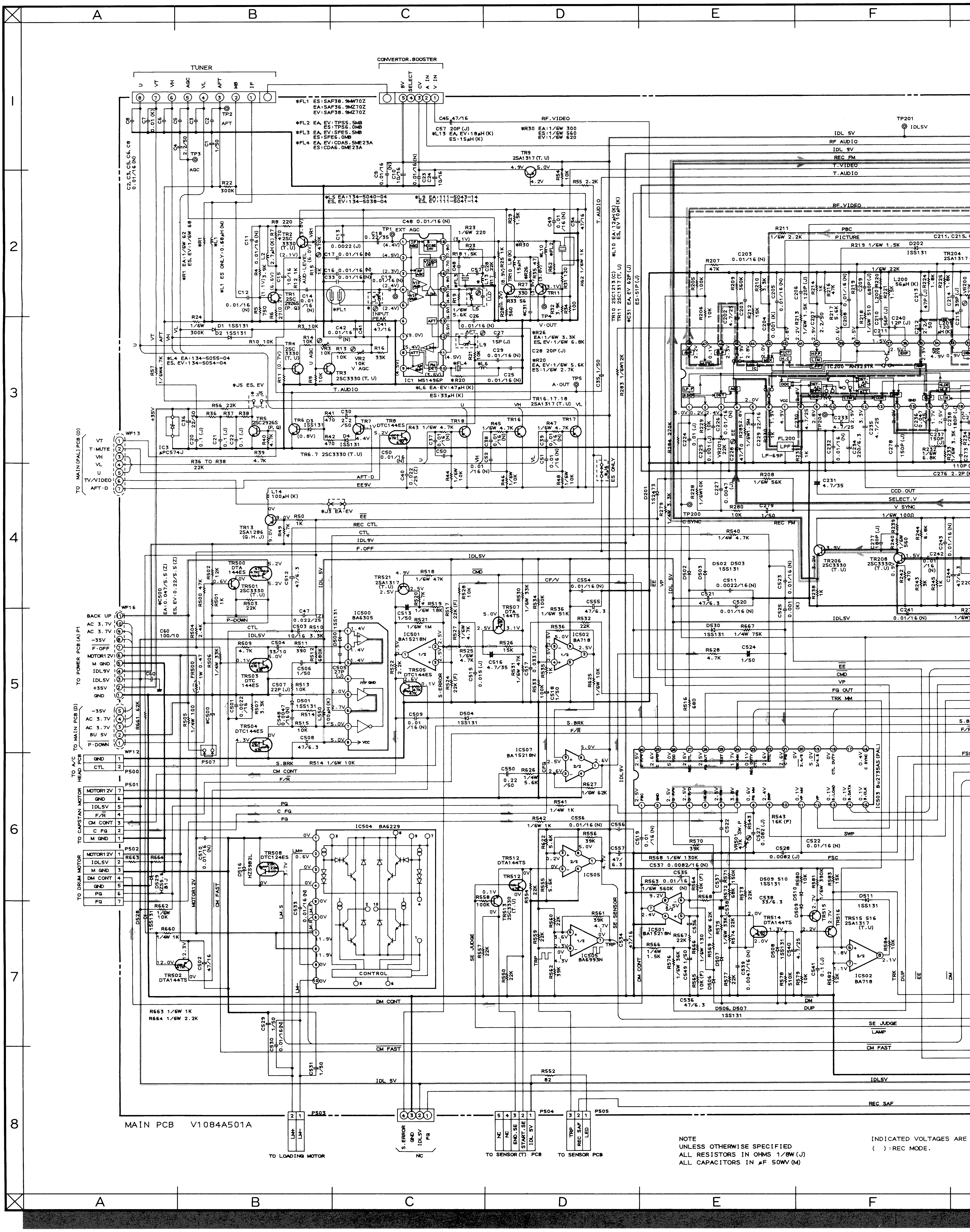
WIRES

WIRE	LOCATION
WF10	D5
WF11	E3
WF12	D6
WF13	D,C6
WF14	F2
WF16	D6

TRANSISTORS

TRANSISTOR	LOCATION
TR1	B5
TR2	C5
TR4	B6
TR5	B6
TR6	C6
TR7	C6
TR8	C6
TR9	A6
TR10	C5
TR11	C5
TR13	D5
TR14	D6
TR15	D5
TR16	C6
TR17	C6
TR18	D6
TR19	E4
TR200	B4
TR201	B4
TR204	B3
TR206	C4
TR208	D4
TR210	D2
TR211	A3
TR212	A2
TR213	A4
TR215	C3
TR500	D6
TR501	D6
TR502	E6
TR503	E5
TR504	E5
TR505	E5
TR507	E5
TR508	F6
TR512	F4
TR513	F4
TR514	F5
TR515	F5
TR516	F5
TR517	F3
TR518	E3
TR520	F4
TR521	E6

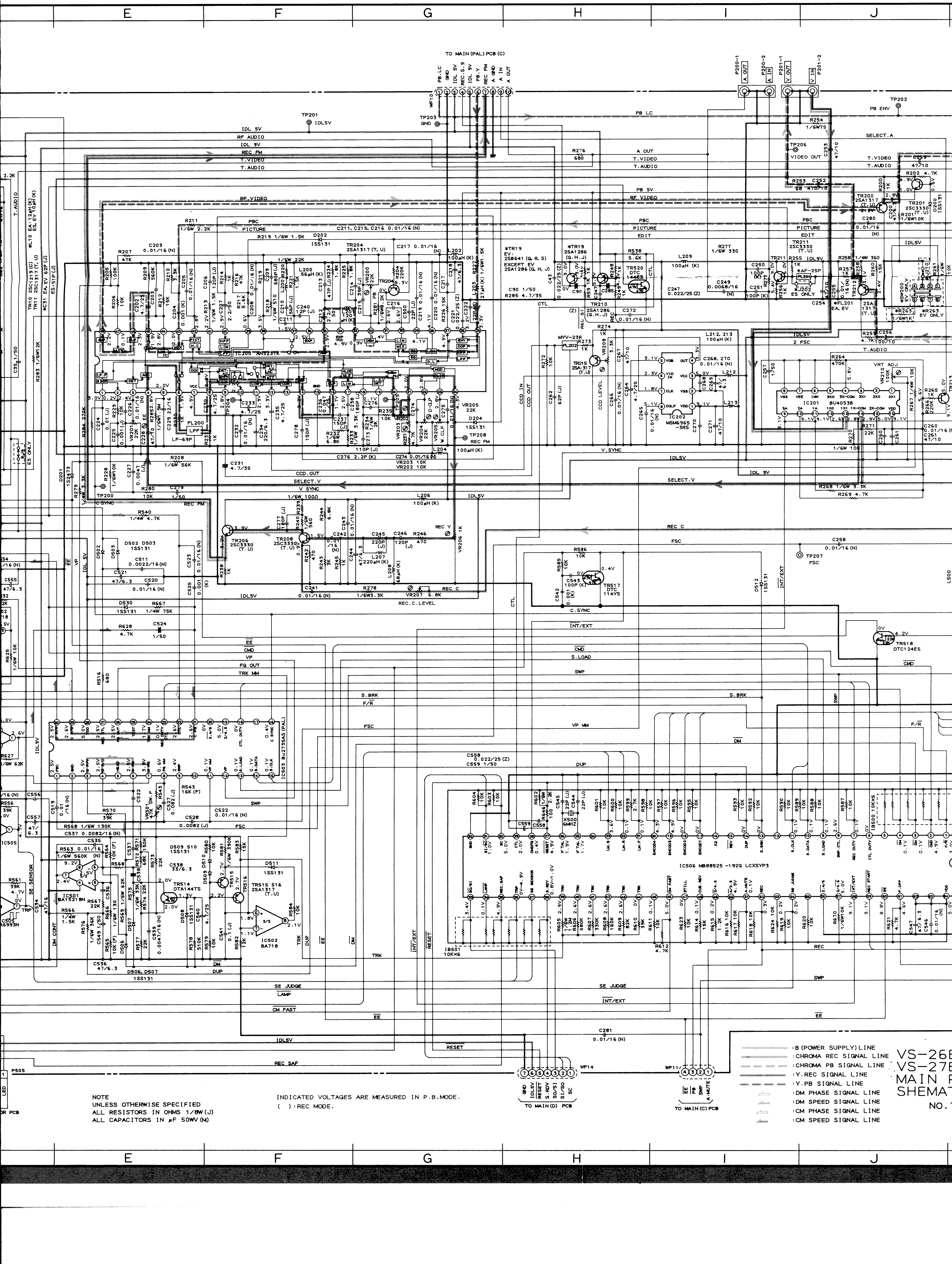

E C B
2SC1213
E C B
2SA1286
E C B
2SA1317
2SC2926
2SC3330
DTA143ES
DTA144ES
DTA144TS
DTC114YS
DTC124ES
DTC144ES


A
B
C
D
E
F
TUNER
CONVERTOR.BOOSTER
RF.VIDEO
TP201
IDL5V
RF AUDIO
IDL 9V
REC FM
T.VIDEO
T.AUDIO
PBC
PICTURE
IC1 M51496P
IC200 AN3251K
IC3 μPC574J
IC500 BA6305
IC501 BA15218N
IC502 BA718
IC503 Bu2735AS (PAL)
IC504 BA6229
IC505 BA6993N
IC507 BA15218N
TO MAIN (PAL) PCB (D)
TO POWER PCB (A) P1
TO MAIN PCB (D)
TO A/C HEAD PCB
TO CAPSTAN MOTOR
TO DRUM MOTOR
WF13
WF16
WF12
P500
P501
P502
P503
P504
P505
CONTROL
TO LOADING MOTOR
NC
TO SENSOR (T) PCB
TO SENSOR PCB
1
2
3
4
5
6
7
8

MAIN PCB V1084A501A

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF 50WV (M)

INDICATED VOLTAGES ARE
( ) : REC MODE.

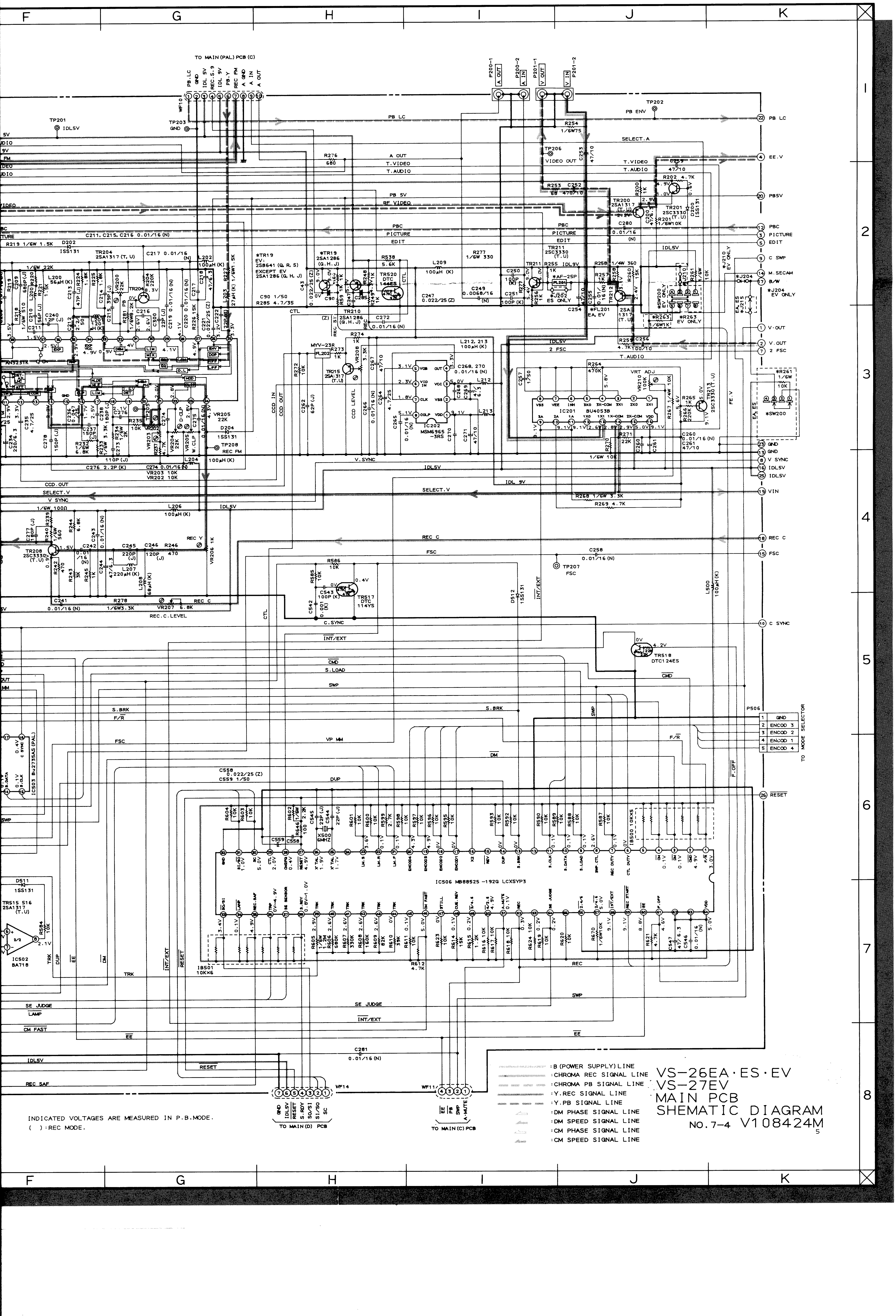

TO MAIN (PAL) PCB (C)
PB.LC
GND
IDL 5V
REC.S.9
IDL 9V
PB.Y
REC FM
A GND
A IN
A OUT
WF10
P200-1
A OUT
P200-2
A IN
P201-1
V OUT
P201-2
V IN
TP201
IDL5V
TP203
GND
TP202
PB ENV
PB LC
SELECT.A
RF AUDIO
RF.VIDEO
REC FM
T.VIDEO
T.AUDIO
PB 5V
PBC
PICTURE
EDIT
IC200 AN3251K
IC201 BU4053B
IC202 MSM6965-3RS
IC501 BA15218N
IC502 BA718
IC503 BU2735AS (PAL)
IC506 MB88525-192G LCXSYP3
TR200 2SA1317
TR201 2SC3330
TR204 2SA1317 (T.U)
TR206 2SC3330 (T.U)
TR208 2SC3330 (T.U)
TR210 2SA1286 (G.H.J)
TR211 2SC3330 (T.U)
TR214 DTA144TS
TR515 516 2SA1317 (T.U)
TR517 DTC 114YS
TR518 DTC124ES
TR520 DTC 144ES
VR202 10K
VR203 10K
VR205 22K
VR206 1K
VR207 6.8K
VR210 100K
VRT ADJ
REC.C.LEVEL
CCD LEVEL
X500 6MHZ
IB500 10KX5
IB501 10KX6
TP200
TP207
FSC
TP208
REC FM
SELECT.V
V.SYNC
C.SYNC
CCD.OUT
REC C
REC Y
INT/EXT
CMD
S.LOAD
SWP
S.BRK
F/R
VP MM
DUP
DM
FG OUT
TRK MM
SE JUDGE
LAMP
CM FAST
EE
RESET
REC SAF
P505
WF14
GND
IDL5V
RESET
S.RDY
S0/S1
S1/S0
SC
TO MAIN (D) PCB
WF11
EE
PB
SWP
A·MUTE
TO MAIN (C) PCB

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN µF 50WV (M)

INDICATED VOLTAGES ARE MEASURED IN P.B.MODE.
( ) : REC MODE.

:B (POWER SUPPLY) LINE
:CHROMA REC SIGNAL LINE
:CHROMA PB SIGNAL LINE
:Y.REC SIGNAL LINE
:Y.PB SIGNAL LINE
:DM PHASE SIGNAL LINE
:DM SPEED SIGNAL LINE
:CM PHASE SIGNAL LINE
:CM SPEED SIGNAL LINE

VS-26
VS-27
MAIN
SHEMAT
NO.

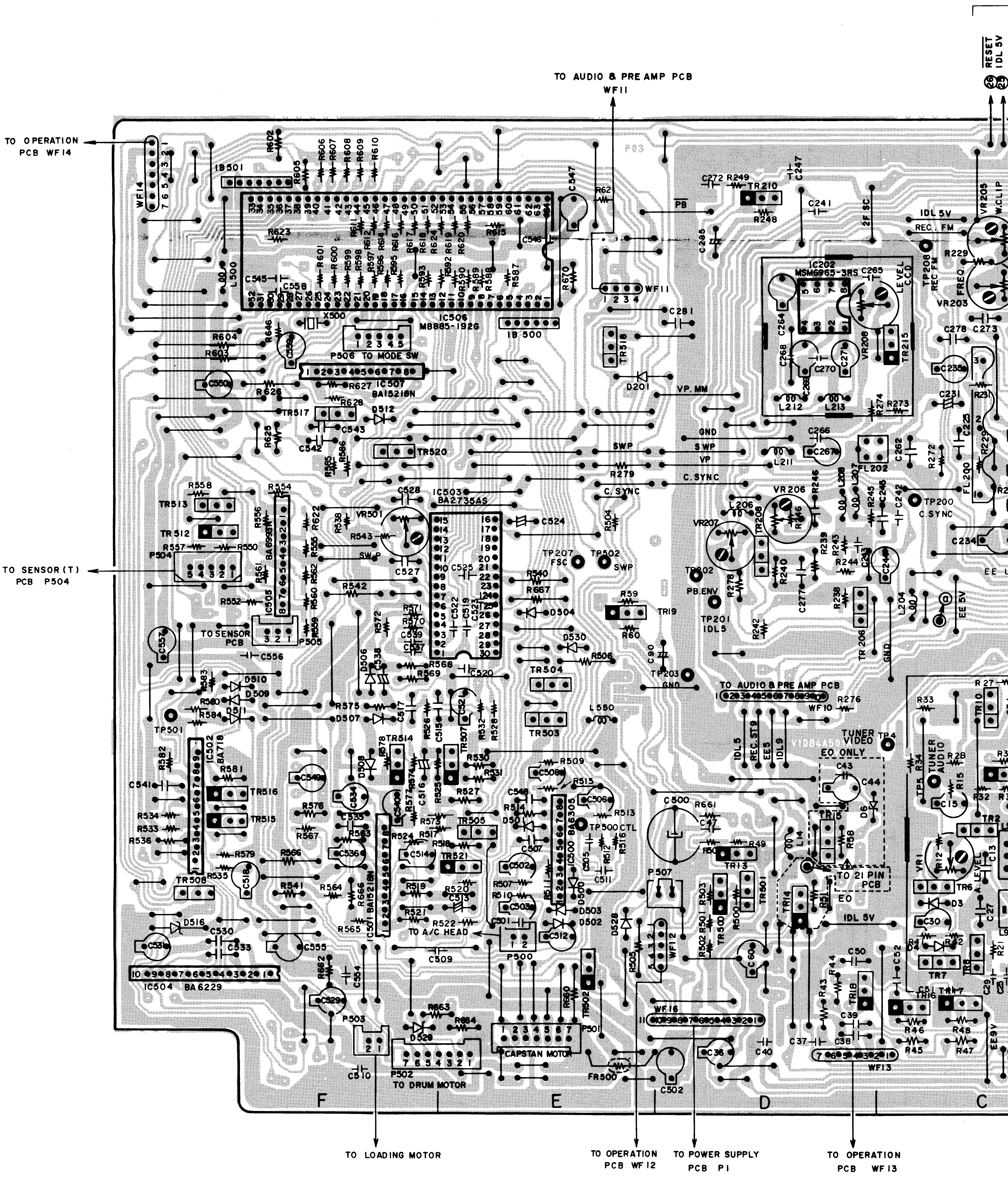


TO MAIN (PAL) PCB (C)
PB.LC
GND
IDL 5V
REC.S.9
IDL 9V
PB.Y
REC FM
A GND
A IN
A OUT
P200-1 A OUT
P200-2 A IN
P201-1 V OUT
P201-2 V IN
TP201 IDL5V
TP202 PB ENV
TP203 GND
TP206 VIDEO OUT
TP207 FSC
TP208 REC FM
PB LC
SELECT.A
EE.V
PB5V
PBC
PICTURE
EDIT
C SWP
M.SECAM
B/W
V.OUT
2 FSC
GND
V SYNC
IDL5V
IDL9V
VIN
REC C
FSC
C SYNC
RESET
IC201 BU4053B
IC202 MSM6965-3RS
IC506 MB88525-192G LCXSYP3
IC502 BA718
IC503 BU2735AS (PAL)
TR518 DTC124ES
TR517 DTC114YS
TR520 DTC144ES
TR208 2SC3330 (T.U)
TR204 2SA1317 (T, U)
TR200 2SA1317
TR201 2SC3330 (T.U)
TR211 2SC3330 (T.U)
TR215 2SA1317 (T.U)
P506
GND
ENCOD 3
ENCOD 2
ENCOD 1
ENCOD 4
TO MODE SELECTOR
WF14
GND
IDL5V
RESET
S.RDY
SO/SI
SI/SO
SC
TO MAIN (D) PCB
WF11
EE
PB
SWP
A.MUTE
TO MAIN (C) PCB

:B (POWER SUPPLY) LINE
:CHROMA REC SIGNAL LINE
:CHROMA PB SIGNAL LINE
:Y.REC SIGNAL LINE
:Y.PB SIGNAL LINE
:DM PHASE SIGNAL LINE
:DM SPEED SIGNAL LINE
:CM PHASE SIGNAL LINE
:CM SPEED SIGNAL LINE

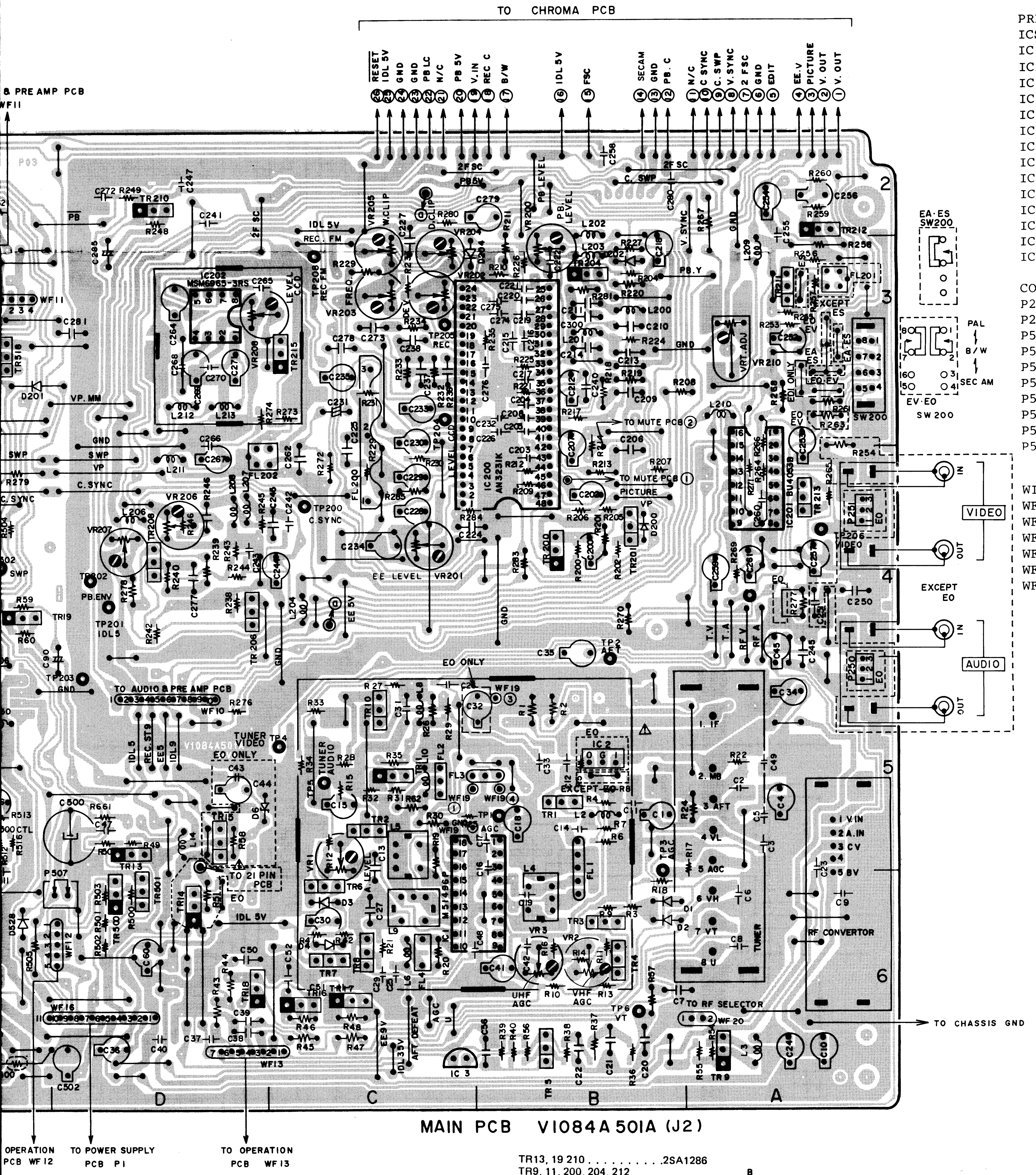
INDICATED VOLTAGES ARE MEASURED IN P.B.MODE.
( ):REC MODE.

VS-26EA·ES·EV
VS-27EV
MAIN PCB
SHEMATIC DIAGRAM
NO.7-4 V108424M
5


TO AUDIO & PRE AMP PCB
WF11
TO OPERATION PCB WF14
TO SENSOR (T) PCB P504
RESET
IDL 5V
IC506 MB885-192G
IC507 BA15218N
IC503 BA2735AS
IC202 MSM6965-3RS
IC502 BA718
IC504 BA6229
IC505 BA6993N
IC501 BA15218N
BA6305
P506 TO MODE SW
TO SENSOR PCB
TO AUDIO & PRE AMP PCB WF10
TO 21 PIN PCB
TO A/C HEAD
CAPSTAN MOTOR
P502 TO DRUM MOTOR
VP. MM
GND
SWP
VP
C. SYNC
IDL 5V
REC. FM
TUNER VIDEO
TUNER AUDIO
EO ONLY
F
E
D
C
TO LOADING MOTOR
TO OPERATION PCB WF12
TO POWER SUPPLY PCB P1
TO OPERATION PCB WF13

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


TO CHROMA PCB
RESET
IDL 5V
GND
GND
PB LC
N/C
PB 5V
V.IN
REC C
B/W
IDL 5V
FSC
SECAM
GND
PB. C
N/C
C SYNC
C. SWP
V. SYNC
2 FSC
GND
EDIT
EE. V
PICTURE
V. OUT
V. OUT
& PRE AMP PCB
WF11
EA·ES
SW200
PAL
B/W
SEC AM
EV·EO
SW 200
VIDEO
IN
OUT
EXCEPT EO
AUDIO
IN
OUT
TO AUDIO & PRE AMP PCB
WF10
TO MUTE PCB ②
TO MUTE PCB ①
TO 21 PIN PCB
TO RF SELECTOR
TO CHASSIS GND
TUNER
RF CONVERTOR
IC 200 AN3231K
IC201 BU4053B
IC202 MSM6965-3RS
M51496P
EE LEVEL
VRT. ADJ
UHF AGC
VHF AGC
EO ONLY
EXCEPT EO
1 VIN
2 A.IN
3 CV
4
5 BV
I. IF
2. MB
3 AFT
4 VL
5 AGC
6 VH
7 VT
8 U
OPERATION PCB WF 12
TO POWER SUPPLY PCB P1
TO OPERATION PCB WF 13
1
2
3
4
5
6
A
B
C
D

MAIN PCB V1084A501A (J2)

PRINCIPAL PARTS LOCATION

ICS
IC1......B,C6
IC2........B5
IC3........C6
IC200....B3,4
IC201......A4
IC202......D3
IC500....E5,6
IC501....F5,6
IC502......F5
IC503......E4
IC504......F6
IC505......F4
IC506....E,F3
IC507......F3

CONNECTORS
P200.....A4,5
P201.......A4
P500.......E6
P501.......E6
P502.....E,F6
P503.......F6
P504.......F4
P505.......F4
P506.......F3
P507.......D6

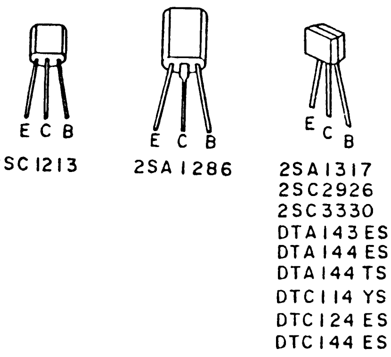
WIRES
WF10.......D5
WF11.......E3
WF12.......D6
WF13.....D,C6
WF14.......F2
WF16.......D6

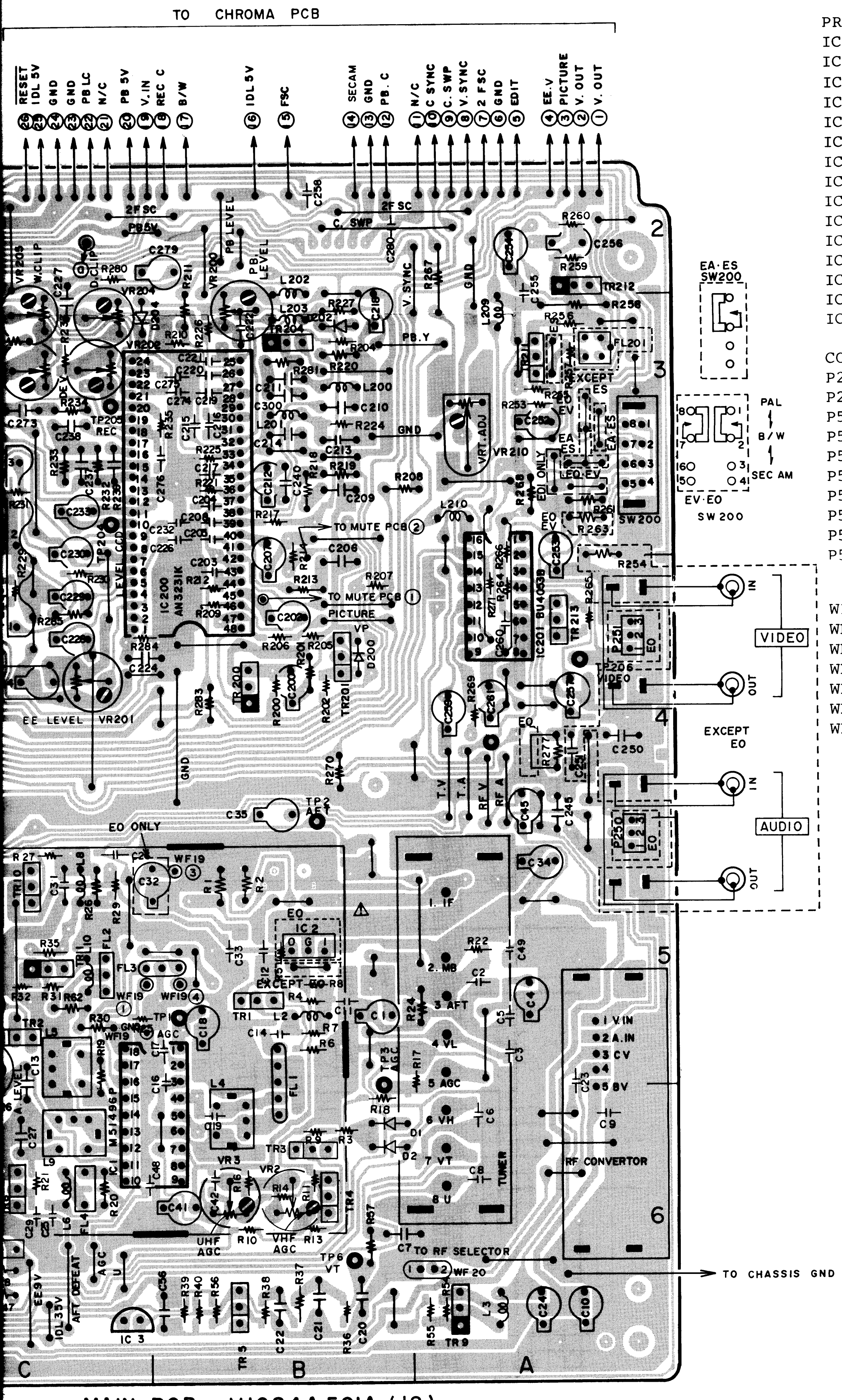
TRA
TR1
TR2
TR4
TR5
TR6
TR7
TR8
TR9
TR1
TR1
TR1
TR1
TR1
TR1
TR1
TR1
TR2
TR2
TR2
TR2
TR2
TR2
TR2
TR2
TR2
TR2
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5
TR5

TR13, 19 210 . . . . .2SA1286
TR9, 11, 200, 204, 212
215, 515, 516, 521 . . . . .2SA1317
TR10 . . . . .2SC1213
TR1, 5 . . . . .2SC2926
TR2, 4, 6, 7, 201, 206,
208, 211, 213, 501, 513 . . . .2SC3330
TR500 . . . . .DTA144ES
TR502, 507, 512, 514 . . . . .DTA144TS
TR517 . . . . .DTC114YS
TR508, 518 . . . . .DTC124ES
TR8, 503, 504, 505, 520. . . .DTC144ES

B
■ ● ● = PNP TRANSISTOR

B
● ● ● = NPN TRANSISTOR


E C B
2SC1213
E C B
2SA1286
E C B
2SA1317
2SC2926
2SC3330
DTA143ES
DTA144ES
DTA144TS
DTC114YS
DTC124ES
DTC144ES


TO CHROMA PCB
㉖ RESET
㉕ IDL 5V
㉔ GND
㉓ GND
㉒ PB LC
㉑ N/C
⑳ PB 5V
⑲ V.IN
⑱ REC C
⑰ B/W
⑯ IDL 5V
⑮ FSC
⑭ SECAM
⑬ GND
⑫ PB. C
⑪ N/C
⑩ C SYNC
⑨ C. SWP
⑧ V. SYNC
⑦ 2 FSC
⑥ GND
⑤ EDIT
④ EE.V
③ PICTURE
② V. OUT
① V. OUT
EA·ES SW200
PAL
B/W
SEC AM
EV·EO SW 200
VIDEO
IN
OUT
EXCEPT EO
AUDIO
IC200 AN3231K
IC201 BU4053B
VRT. ADJ
TO MUTE PCB ②
TO MUTE PCB ①
EE LEVEL VR201
EO ONLY
EXCEPT EO
1 IF
2 MB
3 AFT
4 VL
5 AGC
6 VH
7 VT
8 U
TUNER
RF CONVERTOR
UHF AGC
VHF AGC
TO RF SELECTOR
TO CHASSIS GND
IC 3
C
B
A
2
3
4
5
6

MAIN PCB V1084A501A (J2)

TR13, 19 210	2SA1286
TR9, 11, 200, 204, 212 215, 515, 516, 521	2SA1317
TR10	2SC1213
TR1, 5	2SC2926
TR2, 4, 6, 7, 201, 206, 208, 211, 213, 501, 513	2SC3330
TR500	DTA144ES
TR502, 507, 512, 514	DTA144TS
TR517	DTC114YS
TR508, 518	DTC124ES
TR8, 503, 504, 505, 520.	DTC144ES

B ■●● = PNP TRANSISTOR

B ●●● = NPN TRANSISTOR

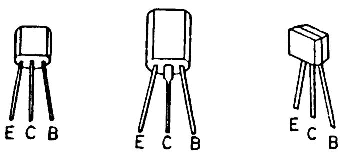
PRINCIPAL PARTS LOCATION

ICS
IC1......B,C6
IC2........B5
IC3........C6
IC200....B3,4
IC201......A4
IC202......D3
IC500....E5,6
IC501....F5,6
IC502......F5
IC503......E4
IC504......F6
IC505......F4
IC506....E,F3
IC507......F3

CONNECTORS
P200.....A4,5
P201.......A4
P500.......E6
P501.......E6
P502.....E,F6
P503.......F6
P504.......F4
P505.......F4
P506.......F3
P507.......D6

WIRES
WF10.......D5
WF11.......E3
WF12.......D6
WF13.....D,C6
WF14.......F2
WF16.......D6

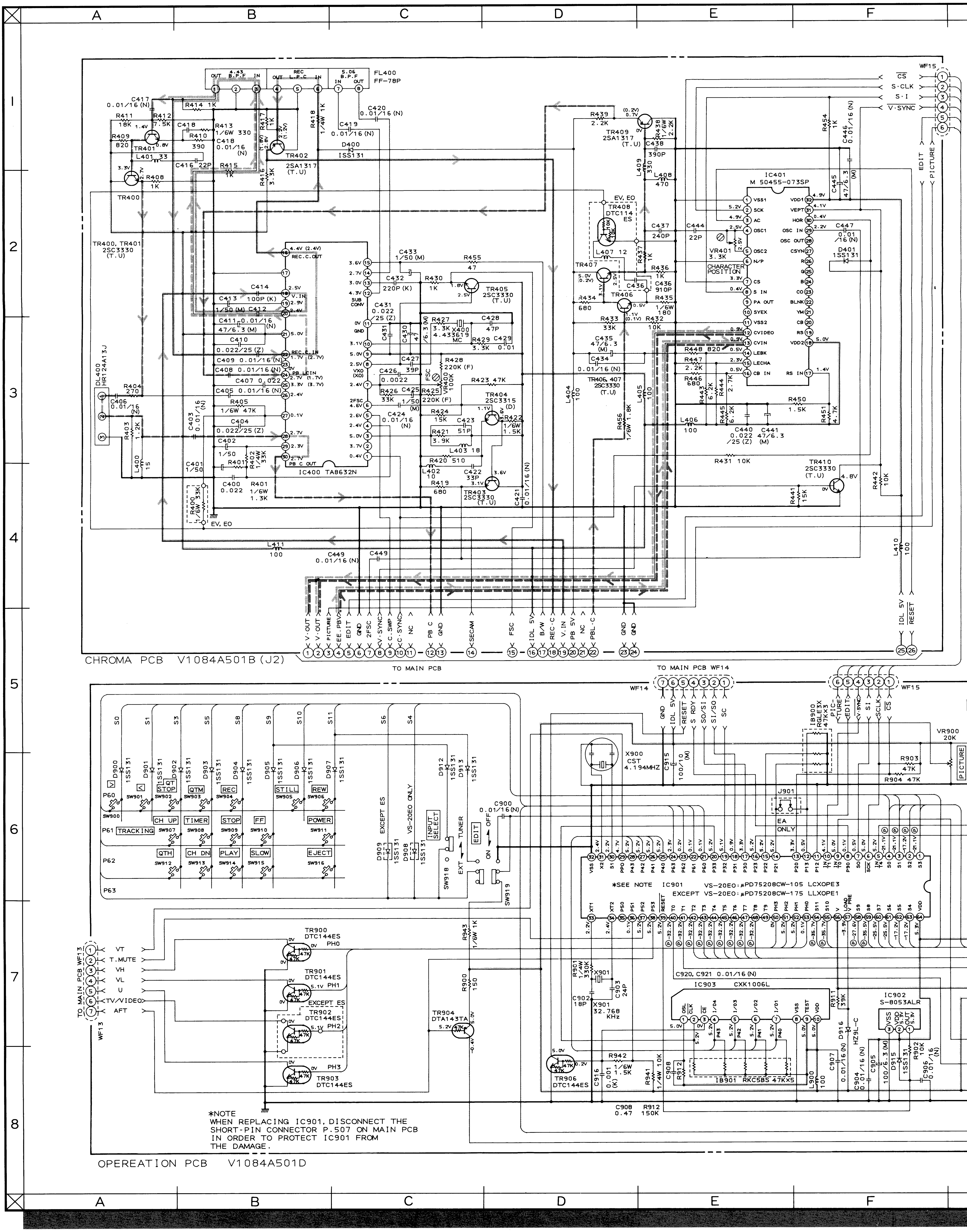
TRANSISTORS
TR1........B5
TR2........C5
TR4........B6
TR5........B6
TR6........C6
TR7........C6
TR8........C6
TR9........A6
TR10.......C5
TR11.......C5
TR13.......D5
TR14.......D6
TR15.......D5
TR16.......C6
TR17.......C6
TR18.......D6
TR19.......E4
TR200......B4
TR201......B4
TR204......B3
TR206......C4
TR208......D4
TR210......D2
TR211......A3
TR212......A2
TR213......A4
TR215......C3
TR500......D6
TR501......D6
TR502......E6
TR503......E5
TR504......E5
TR505......E5
TR507......E5
TR508......F6
TR512......F4
TR513......F4
TR514......F5
TR515......F5
TR516......F5
TR517......F3
TR518......E3
TR520......F4
TR521......E6

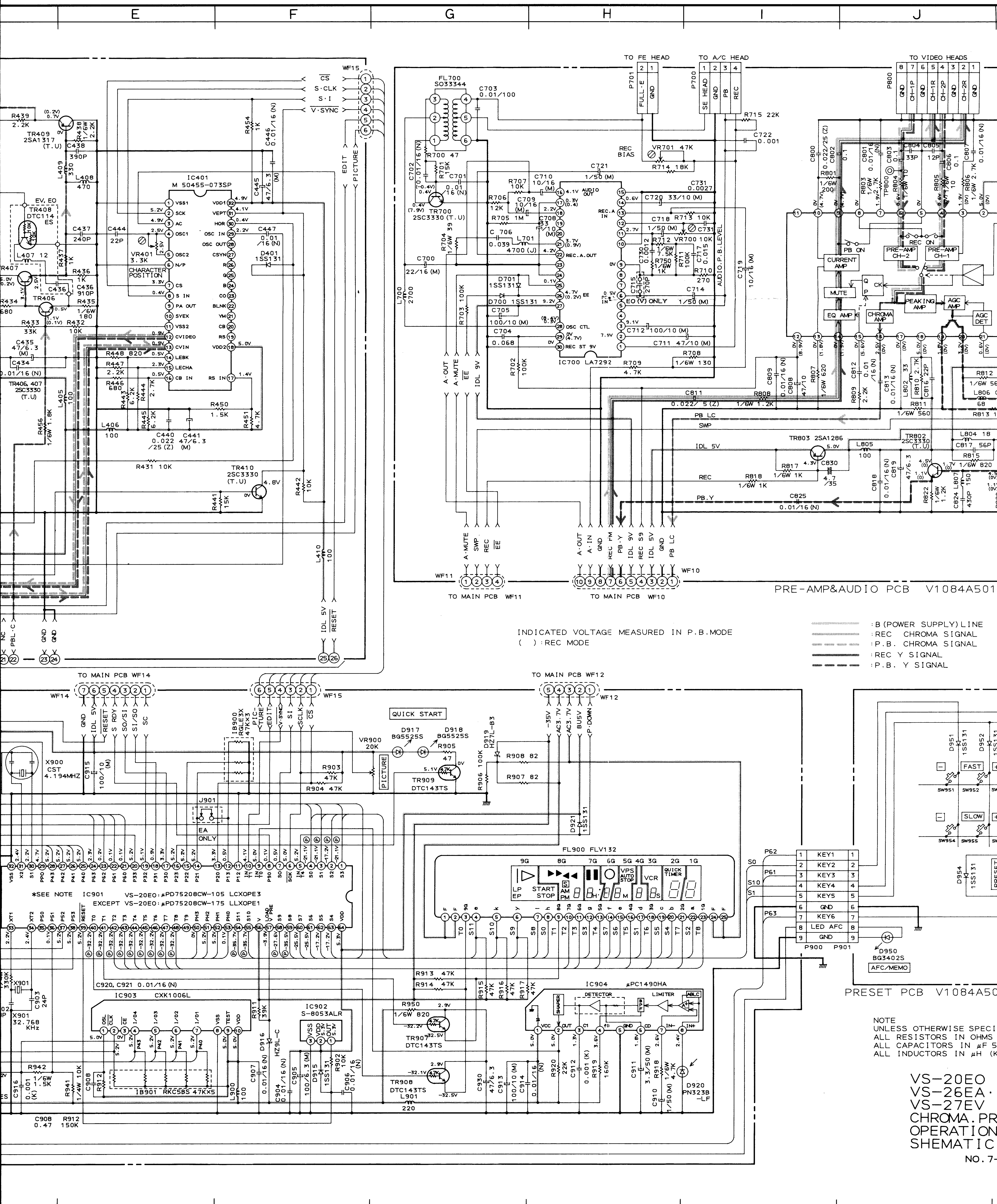


2SC1213

2SA1286

2SA1317
2SC2926
2SC3330
DTA143ES
DTA144ES
DTA144TS
DTC114YS
DTC124ES
DTC144ES


A
B
C
D
E
F
1
2
3
4
5
6
7
8
4.43 B.P.F
REC L.P.F
5.06 B.P.F
FL400 FF-78P
TR400
TR401
TR402 2SA1317 (T.U)
TR400, TR401 2SC3330 (T.U)
DL400 HR124A13J
IC400 TA8632N
TR403 2SC3330 (T.U)
TR404 2SC3315 (D)
TR405 2SC3330 (T.U)
X400 4.433619 MC
VR400 100K
TR406 TR407
TR406, 407 2SC3330 (T.U)
TR408 DTC114 ES
EV, EO
TR409 2SA1317 (T.U)
IC401 M 50455-073SP
VR401 3.3K CHARACTER POSITION
D401 1SS131
TR410 2SC3330 (T.U)
WF15
CS
S·CLK
S·I
V·SYNC
EDIT
PICTURE
IDL 5V
RESET
V·OUT
V·OUT
PICTURE
EE.PBV
EDIT
GND
2FSC
V·SYNC
C.SWP
C·SYNC
NC
PB C
GND
SECAM
FSC
IDL 5V
B/W
REC·C
V.IN
PB 5V
NC
PBL·C
GND
GND
CHROMA PCB V1084A501B (J2)
TO MAIN PCB
TO MAIN PCB WF14
WF14
GND
IDL 5V
RESET
S RDY
SO/SI
SI/SO
SC
IB900 RGLE3X 47KX3
VR900 20K
PICTURE
R903 47K
R904 47K
J901
EA ONLY
X900 CST 4.194MHZ
C915 100/10 (M)
SW900
SW901 QT STOP
SW902
SW903 QTM
SW904 REC
SW905 STILL
SW906 REW
SW907 CH UP
SW908 TIMER
SW909 STOP
SW910 FF
SW911 POWER
SW912 QTH
SW913 CH DN
SW914 PLAY
SW915 SLOW
SW916 EJECT
TRACKING
P60
P61
P62
P63
EXCEPT ES
VS-20EO ONLY
INPUT SELECT
SW918
TUNER
EXT
EDIT
ON
OFF
SW919
C900 0.01/16 (N)
*SEE NOTE IC901 VS-20EO: μPD75208CW-105 LCXOPE3
EXCEPT VS-20EO: μPD75208CW-175 LLXOPE1
TR900 DTC144ES PH0
TR901 DTC144ES PH1
EXCEPT ES
TR902 DTC144ES PH2
TR903 DTC144ES PH3
TR904 DTA143TA
TR906 DTC144ES
TO MAIN PCB WF13
VT
T.MUTE
VH
VL
U
TV/VIDEO
AFT
X901 32.768 KHz
IC903 CXK1006L
IB901 RKC5BS 47KX5
IC902 S-8053ALR
D915 1SS131
D916 HZ9L-C
C920, C921 0.01/16 (N)
*NOTE
WHEN REPLACING IC901, DISCONNECT THE SHORT-PIN CONNECTOR P.507 ON MAIN PCB IN ORDER TO PROTECT IC901 FROM THE DAMAGE.
OPEREATION PCB V1084A501D


E
F
G
H
I
J
IC401 M 50455-073SP
CHARACTER POSITION
VR401 3.3K
TR408 DTC114ES
TR409 2SA1317 (T.U)
TR406
TR406, 407 2SC3330 (T.U)
TR410 2SC3330 (T.U)
WF15
CS
S·CLK
S·I
V·SYNC
EDIT
PICTURE
FL700 SO33344
TR700 2SC3330 (T.U)
IC700 LA7292
TO FE HEAD
TO A/C HEAD
TO VIDEO HEADS
P701
P700
P800
FULL·E
GND
SE HEAD
PB
REC
CH-1P
CH-1R
CH-2P
CH-2R
REC BIAS
VR701 47K
AUDIO OUT
REC.A IN
REC.A.OUT
AUDIO.P.B.LEVEL
EO (V) ONLY
OSC CTL
REC ST 9V
PB ON
REC ON
PRE-AMP CH-2
PRE-AMP CH-1
CURRENT AMP
MUTE
EQ AMP
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
CK
Q
D
A·OUT
A·MUTE
EE
IDL 9V
PB LC
SWP
IDL 5V
REC
PB.Y
TR803 2SA1286
TR802 2SC3330 (T.U)
A·MUTE
SWP
REC
EE
WF11
TO MAIN PCB WF11
A·OUT
A·IN
GND
REC PM
PB·Y
IDL 9V
REC S9
IDL 5V
GND
PB LC
WF10
TO MAIN PCB WF10
PRE-AMP&AUDIO PCB V1084A501
NC
PBL·C
GND
GND
IDL 5V
RESET
TO MAIN PCB WF14
WF14
GND
IDL 5V
RESET
S RDY
SO/SI
SI/SO
SC
IB900 RKL3EX 47KX3
PIC-TURE
EDIT
V·SYNC
SI
SCLK
CS
QUICK START
VR900 20K
D917 BG5525S
D918 BG5525S
D919 HZ7L-B3
TR909 DTC143TS
PICTURE
TO MAIN PCB WF12
WF12
-35V
AC3.7V
AC3.7V
BU5V
P·DOWN
X900 CST 4.194MHZ
J901
EA ONLY
D921 1SS131
FL900 FLV132
LP EP
START STOP
AM PM
VPS AUTO STOP
VCR
QUICK TIMER
*SEE NOTE IC901 VS-20EO:μPD75208CW-105 LCXOPE3
EXCEPT VS-20EO:μPD75208CW-175 LLXOPE1
X901 32.768 KHz
C920, C921 0.01/16 (N)
IC903 CXK1006L
IB901 RKC5BS 47KX5
IC902 S-8053ALR
TR907 DTC143TS
TR908 DTC143TS
L901 220
IC904 μPC1490HA
DETECTOR
LIMITER
SHAPER
D920 PN323B -LF
KEY1
KEY2
KEY3
KEY4
KEY5
GND
KEY6
LED AFC
GND
P900
P901
D950 BG3402S
AFC/MEMO
FAST
SLOW
SW951
SW952
SW954
SW955
PRESET PCB V1084A50

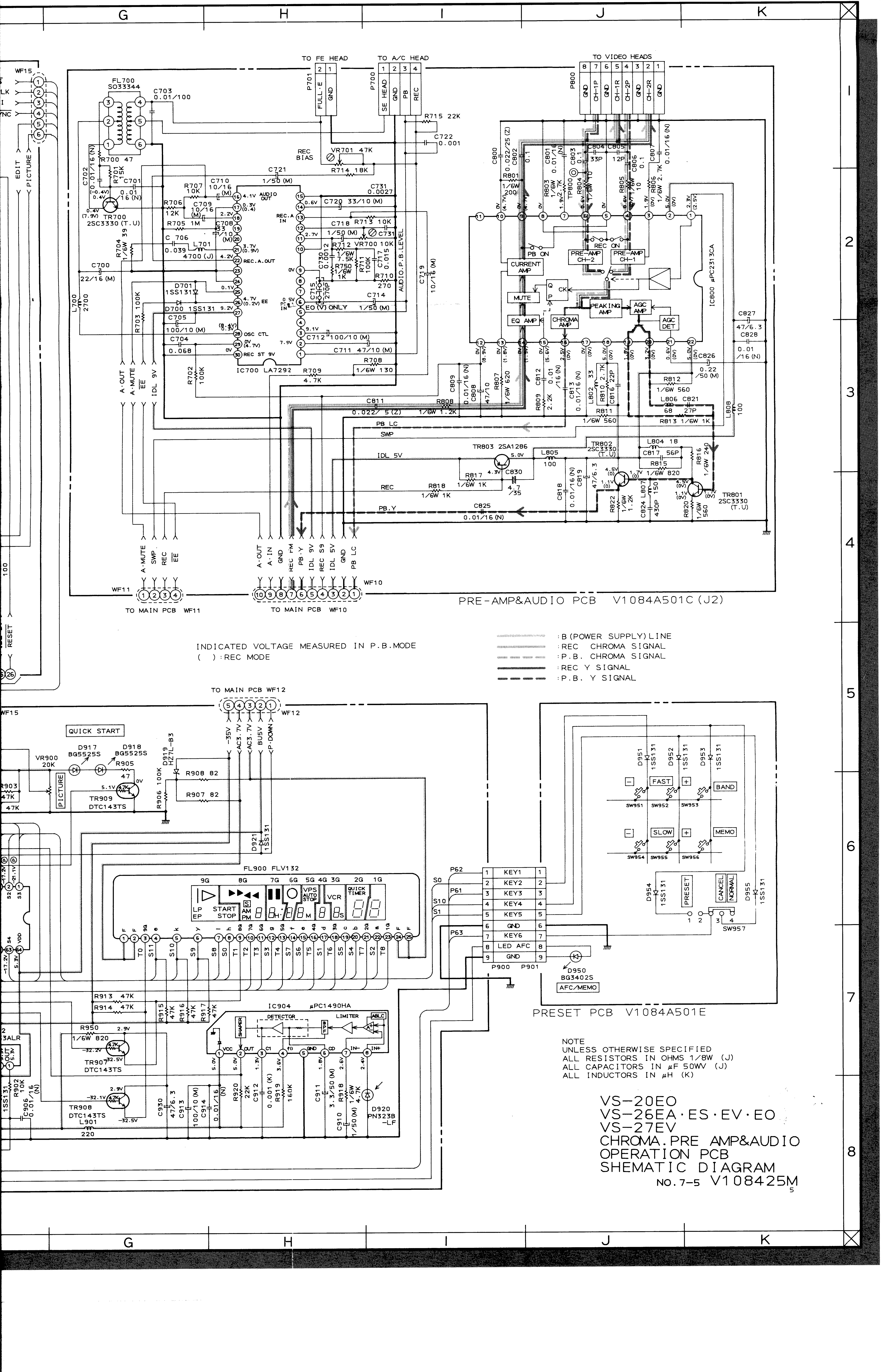
INDICATED VOLTAGE MEASURED IN P.B.MODE
( ):REC MODE

:B(POWER SUPPLY)LINE
:REC CHROMA SIGNAL
:P.B. CHROMA SIGNAL
:REC Y SIGNAL
:P.B. Y SIGNAL

NOTE
UNLESS OTHERWISE SPECI
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF 5
ALL INDUCTORS IN μH (K

VS-20EO
VS-26EA·
VS-27EV
CHROMA.PR
OPERATION
SHEMATIC

NO.7-


G
H
I
J
K
1
2
3
4
5
6
7
8
TO FE HEAD
TO A/C HEAD
TO VIDEO HEADS
P701
FULL·E
GND
P700
SE HEAD
GND
PB
REC
P800
CH-1P
CH-1R
CH-2P
CH-2R
FL700
SO33344
C703 0.01/100
R715 22K
C722 0.001
REC BIAS
VR701 47K
R714 18K
R700 47
C702 0.01/16 (N)
R701 15K
C701 0.01/16 (N)
TR700 2SC3330 (T.U)
R707 10K
C710 10/16 (M)
C721 1/50 (M)
C731 0.0027
R706 12K
C709 10/16 (M)
C720 33/10 (M)
R705 1M
C708 33/10 (M)
REC.A IN
C718 1/50 (M)
R713 10K
C731
C 706 0.039
L701 4700 (J)
R712 1/6W 7.5K
VR700 10K
AUDIO.P.B.LEVEL
R704 1/6W 39
REC.A.OUT
C700 22/16 (M)
C730 0.0012
R750 1/6W 1K
R711 100K
C717 0.015
R710 270
C719 10/16 (M)
D701 1SS131
C715 270P
C714 1/50 (M)
L700 2700
R703 100K
D700 1SS131
EO (V) ONLY
C705 100/10 (M)
OSC CTL
C712 100/10 (M)
C704 0.068
REC ST 9V
C711 47/10 (M)
R708 1/6W 130
IC700 LA7292
R709 4.7K
R702 100K
A·OUT
A·MUTE
EE
IDL 9V
C800 0.022/25 (Z)
C802 0.1
R801 1/6W 200
C801 0.01/16 (N)
R803 1/6W 2.7K
C803 0.1
TP800
R804 1/6W 10
C804 33P
C805 12P
R805 10
C806 0.1
R806 1/6W 2.7K
C807 0.01/16 (N)
PB ON
REC ON
PRE-AMP CH-2
PRE-AMP CH-1
CURRENT AMP
MUTE
EQ AMP
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
IC800 µPC2313CA
C827 47/6.3
C828 0.01/16 (N)
C826 0.22/50 (M)
R812 1/6W 560
C809 0.01/16 (N)
C808 47/10
R807 1/6W 620
C812 0.01/16 (N)
R809 2.2K
C813 0.01/16 (N)
L802 33
R810 2.7K
C816 22P
R811 1/6W 560
L806 68
C821 27P
L808 100
R813 1/6W 1K
C811 0.022/5 (Z)
R808 1/6W 1.2K
PB LC
SWP
IDL 5V
TR803 2SA1286
L805 100
TR802 2SC3330 (T.U)
L804 18
C817 56P
R815 1/6W 820
R816 1/6W 240
R817 1/6W 1K
C830 4.7/35
REC
R818 1/6W 1K
C818 0.01/16 (N)
C819 47/6.3
R822 1/6W 1.2K
C824 430P
L807 150
R820 1/6W 560
TR801 2SC3330 (T.U)
PB.Y
C825 0.01/16 (N)
A·MUTE
SWP
REC
EE
A·OUT
A·IN
GND
REC FM
PB·Y
IDL 9V
REC S9
IDL 5V
GND
PB LC
WF11
TO MAIN PCB WF11
WF10
TO MAIN PCB WF10
WF15
EDIT
PICTURE
RESET
TO MAIN PCB WF12
WF12
-35V
AC3.7V
AC3.7V
BU5V
P·DOWN
QUICK START
D917 BG5525S
D918 BG5525S
VR900 20K
R905 47
D919 HZ7L-B3
R908 82
R907 82
R906 100K
PICTURE
TR909 DTC143TS
D921 1SS131
FL900 FLV132
LP EP
START STOP
AM PM
VPS AUTO STOP
VCR
QUICK TIMER
S0
S1
S10
P62
P61
P63
KEY1
KEY2
KEY3
KEY4
KEY5
GND
KEY6
LED AFC
GND
P900
P901
D950 BG3402S
AFC/MEMO
D951 1SS131
D952 1SS131
D953 1SS131
FAST
BAND
SW951
SW952
SW953
SLOW
MEMO
SW954
SW955
SW956
D954 1SS131
PRESET
CANCEL
NORMAL
D955 1SS131
SW957
R913 47K
R914 47K
R915 47K
R916 47K
R917 47K
IC904 µPC1490HA
DETECTOR
LIMITER
SHAPER
R950 1/6W 820
TR907 DTC143TS
TR908 DTC143TS
L901 220
C930 47/6.3
C913 100/10 (M)
C914 0.01/16 (N)
R920 22K
C912 0.001 (K)
R919 160K
C911 3.3/50 (M)
R918 1/6W 4.7K
C910 1/50 (M)
D920 PN323B-LF
C906 0.01/16 (N)
R902 10K

PRE-AMP&AUDIO PCB V1084A501C (J2)

INDICATED VOLTAGE MEASURED IN P.B.MODE
( ) :REC MODE

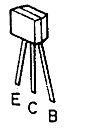
:B (POWER SUPPLY) LINE
:REC CHROMA SIGNAL
:P.B. CHROMA SIGNAL
:REC Y SIGNAL
:P.B. Y SIGNAL

PRESET PCB V1084A501E

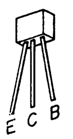
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN µF 50WV (J)
ALL INDUCTORS IN µH (K)

VS-20EO
VS-26EA·ES·EV·EO
VS-27EV
CHROMA.PRE AMP&AUDIO
OPERATION PCB
SHEMATIC DIAGRAM
NO.7-5 V108425M 5

TR400,401,403,405,
406,407,410..........2SC3330
TR402,409..............2SA1317
TR404..................2SC3315
TR408..................DTC114ES



2SA1317
2SC3330
DTC144ES



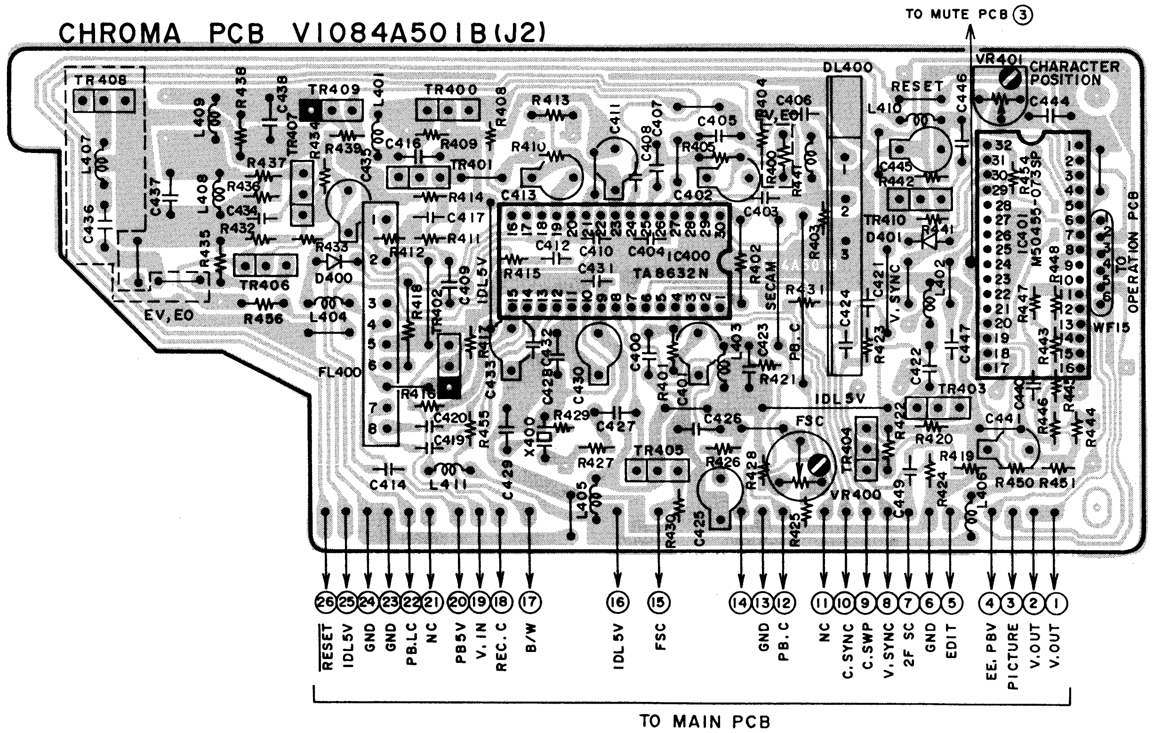
2SC3315

B ■ • • = PNP TRANSISTOR

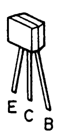
B • • • = NPN TRANSISTOR

TO MUTE PCB ③

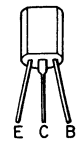
CHROMA PCB V1084A501B(J2)


TR408
TR409
TR400
TR401
TR406
TR407
TR410
TR403
TR405
TR404
DL400
RESET
VR401
CHARACTER POSITION
IC400
TA8632N
IC401
M50455-073SP
TO OPERATION PCB
WF15
FL400
X400
EV, EO
IDL5V
V.SYNC
SECAM
PB-C
FSC
VR400
D400
D401
㉖ ㉕ ㉔ ㉓ ㉒ ㉑ ⑳ ⑲ ⑱ ⑰
⑯
⑮
⑭ ⑬ ⑫
⑪ ⑩ ⑨ ⑧ ⑦ ⑥ ⑤
④ ③ ② ①
RESET
IDL5V
GND
GND
PB.LC
NC
PB5V
V.IN
REC.C
B/W
IDL5V
FSC
GND
GND
PB.C
NC
C.SYNC
C.SWP
V.SYNC
2F SC
GND
EDIT
EE.PBV
PICTURE
V.OUT
V.OUT
TO MAIN PCB

TR700,801,802 ····· 2SC3330
TR803 ············· 2SA1286



2SC3330

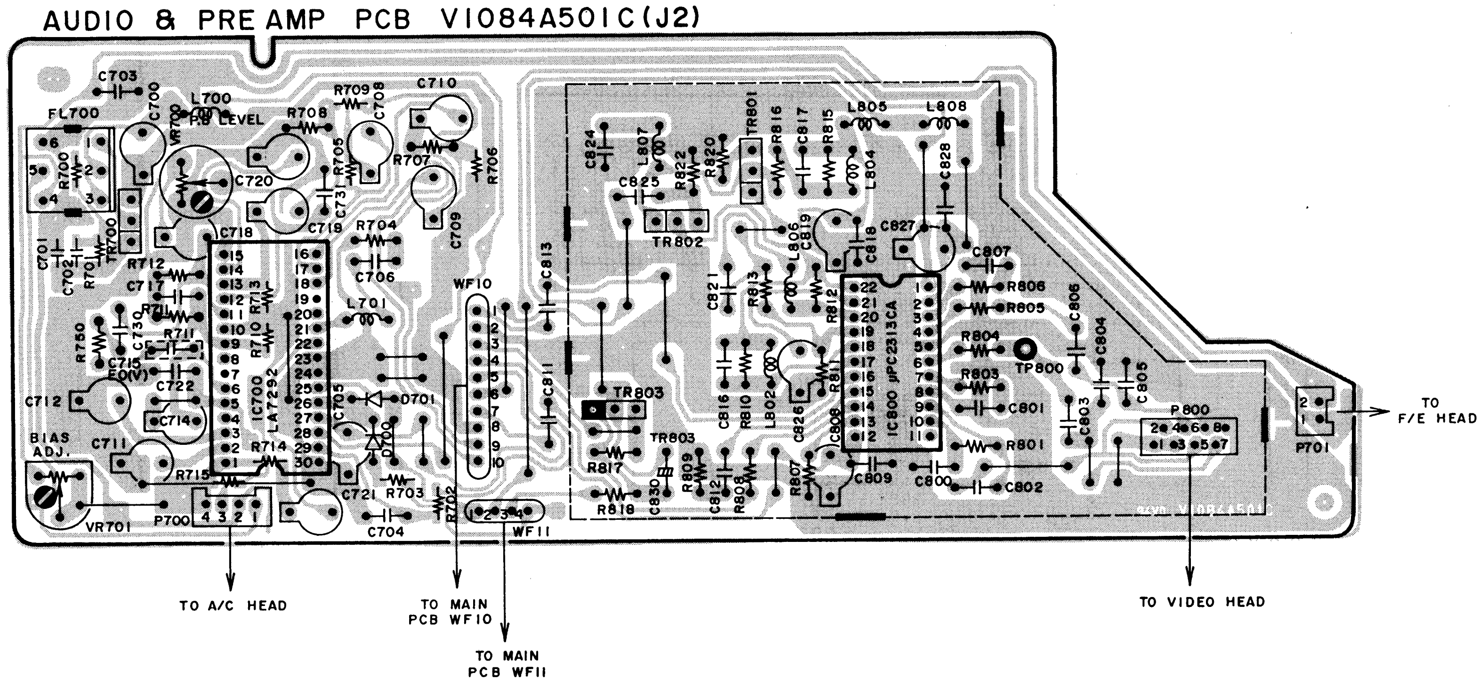


2SA1286

B ■ • • = PNP TRANSISTOR

B • • • = NPN TRANSISTOR

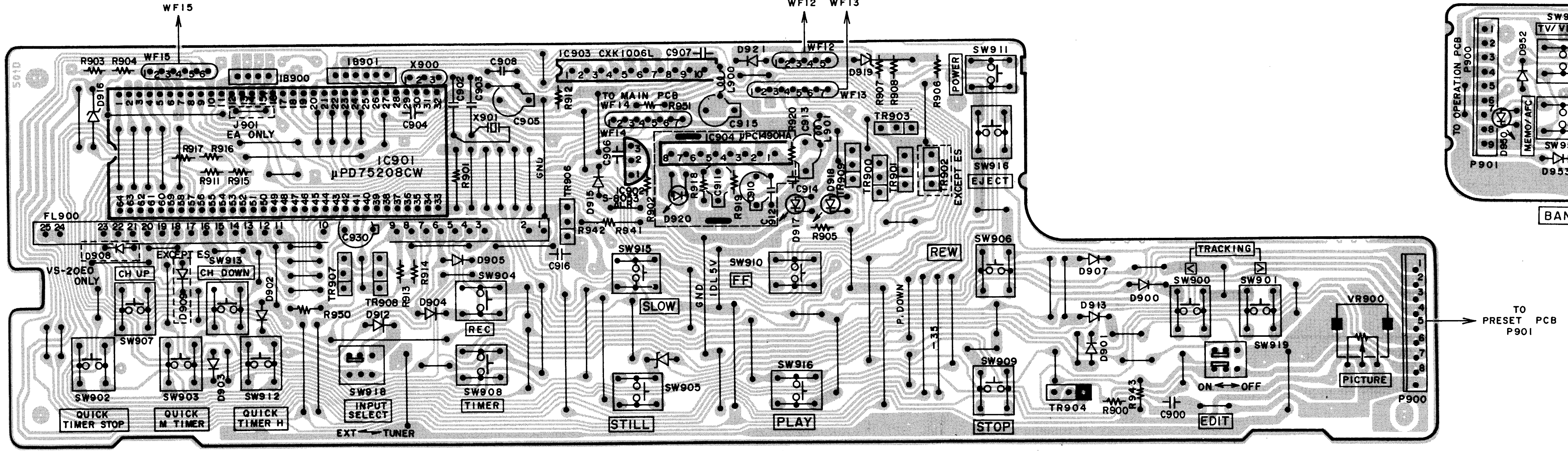
AUDIO & PRE AMP PCB V1084A501C(J2)


FL700
L700
PB LEVEL
VR700
IC700
LA7292
TR700
TR801
TR802
TR803
IC800
μPC2313CA
WF10
WF11
TP800
P800
P700
P701
BIAS ADJ.
VR701
TO F/E HEAD
TO A/C HEAD
TO MAIN PCB WF10
TO MAIN PCB WF11
TO VIDEO HEAD

TO CHROMA PCB WF15

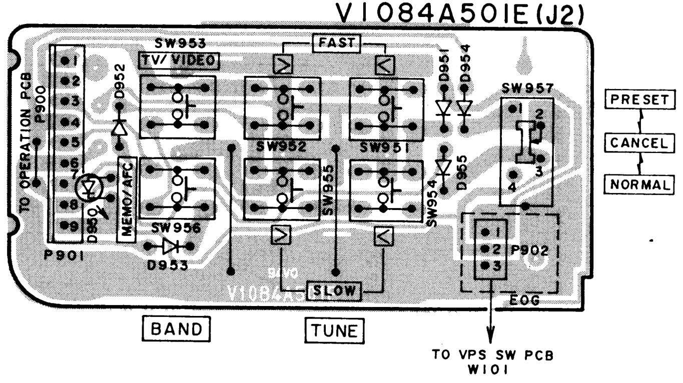
TO MAIN PCB WF12

TO MAIN PCB WF13


WF15
IB900
IB901
X900
IC903 CXK1006L
WF12
WF13
TO MAIN PCB WF14
IC904 μPC1490HA
J901
EA ONLY
IC901
μPD75208CW
FL900
VS-20EO ONLY
EXCEPT ES
EXCEPT ES
SW911
POWER
SW916
EJECT
SW906
REW
SW913
CH UP
CH DOWN
SW907
SW902
QUICK TIMER STOP
SW903
QUICK M TIMER
SW912
QUICK TIMER H
SW918
INPUT SELECT
EXT
TUNER
SW904
REC
SW908
TIMER
SW915
SLOW
SW905
STILL
SW910
FF
SW916
PLAY
SW909
STOP
TR900
TR901
TR902
TR903
TR904
TR906
TR907
TR908
GND
IDL5V
P.DOWN
-35
TRACKING
SW900
SW901
SW919
ON
OFF
EDIT
VR900
PICTURE
P900
TO PRESET PCB P901

OPERATION PCB V1084A501D(J2)

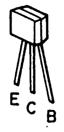
PRESET PCB
V1084A501E(J2)


SW953
TV/VIDEO
FAST
SW952
SW951
SW955
SW957
SW956
MEMO/APC
SW954
SLOW
P901
P902
TO OPERATION PCB
D950
D951
D952
D953
D954
D955
EOG
PRESET
CANCEL
NORMAL
BAND
TUNE
TO VPS SW PCB W101

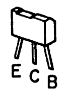
TR900,901,902,903
906 ················ DTC144ES
TR904 ·············· DTA143TA
TR907,908,909 ····· DTC143TS

B ■ • • = PNP TRANSISTOR

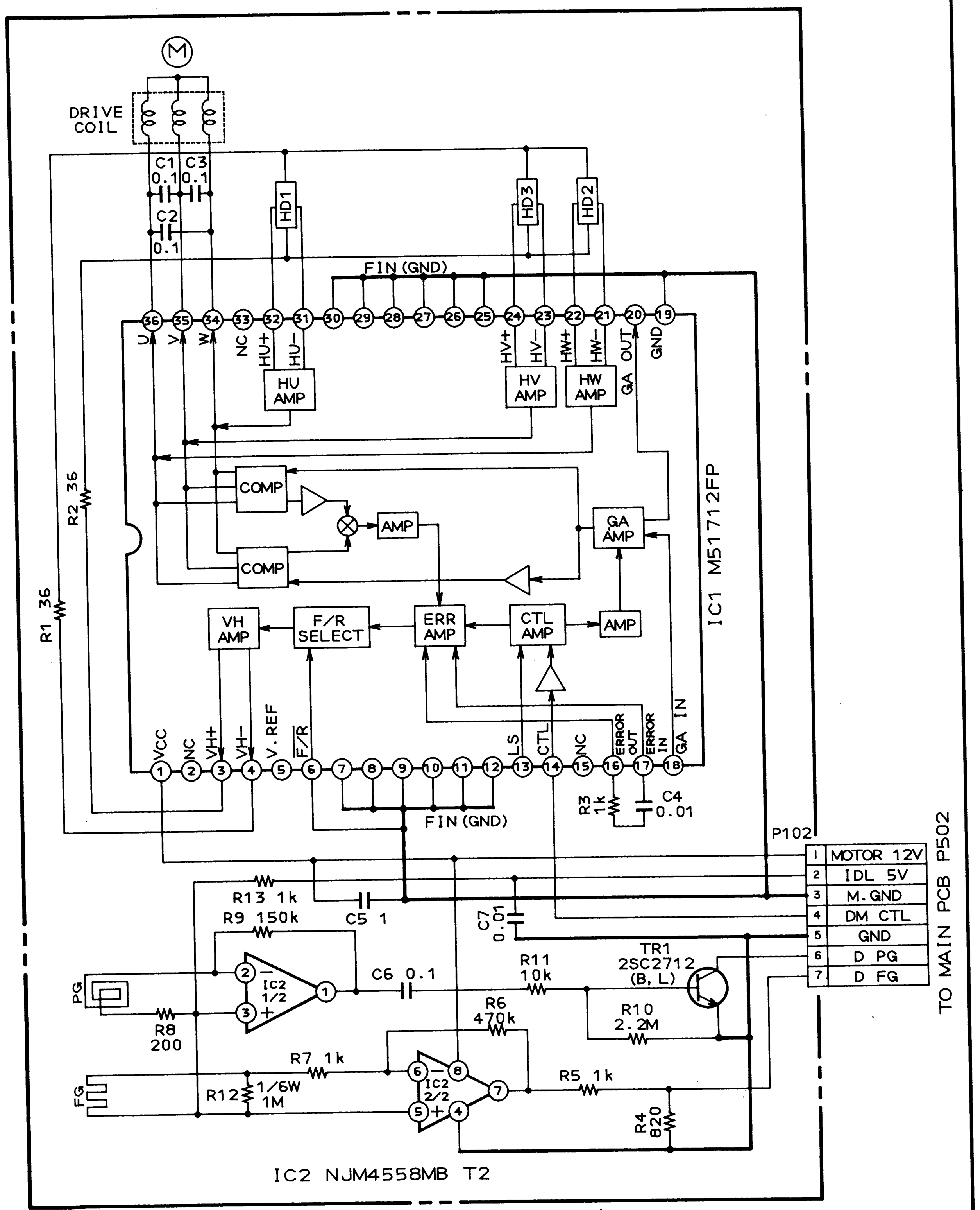
B • • • = NPN TRANSISTOR



DTC144ES
DTC143TS



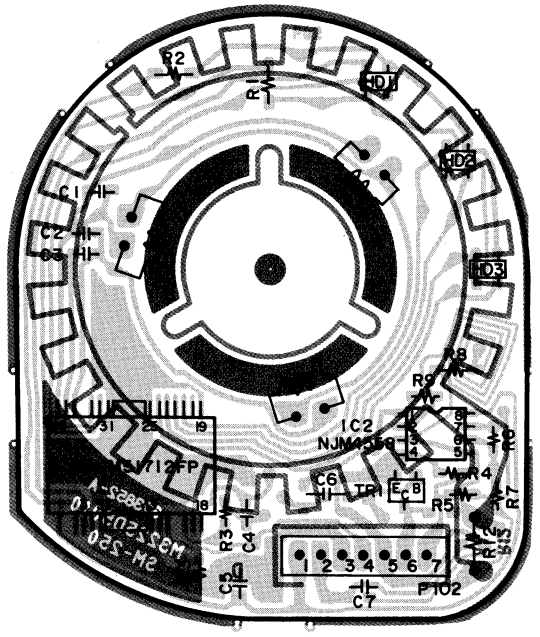
DTA143TA


M
DRIVE COIL
C1 0.1
C3 0.1
C2 0.1
HD1
HD3
HD2
FIN (GND)
36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19
U
V
W
NC
HU+
HU−
HV+
HV−
HW+
HW−
OUT
GA
GND
HU AMP
HV AMP
HW AMP
COMP
AMP
GA AMP
COMP
VH AMP
F/R SELECT
ERR AMP
CTL AMP
AMP
IC1 M51712FP
R2 36
R1 36
VCC
NC
VH+
VH−
V.REF
F/R
LS
CTL
NC
ERROR OUT
ERROR IN
GA IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
R3 1k
C4 0.01
FIN (GND)
P102
1 MOTOR 12V
2 IDL 5V
3 M.GND
4 DM CTL
5 GND
6 D PG
7 D FG
TO MAIN PCB P502
R13 1k
R9 150k
C5 1
C7 0.01
PG
R8 200
IC2 1/2
C6 0.1
R11 10k
TR1 2SC2712 (B, L)
R10 2.2M
R6 470k
R7 1k
FG
R12 1/6W 1M
IC2 2/2
R5 1k
R4 820
IC2 NJM4558MB T2

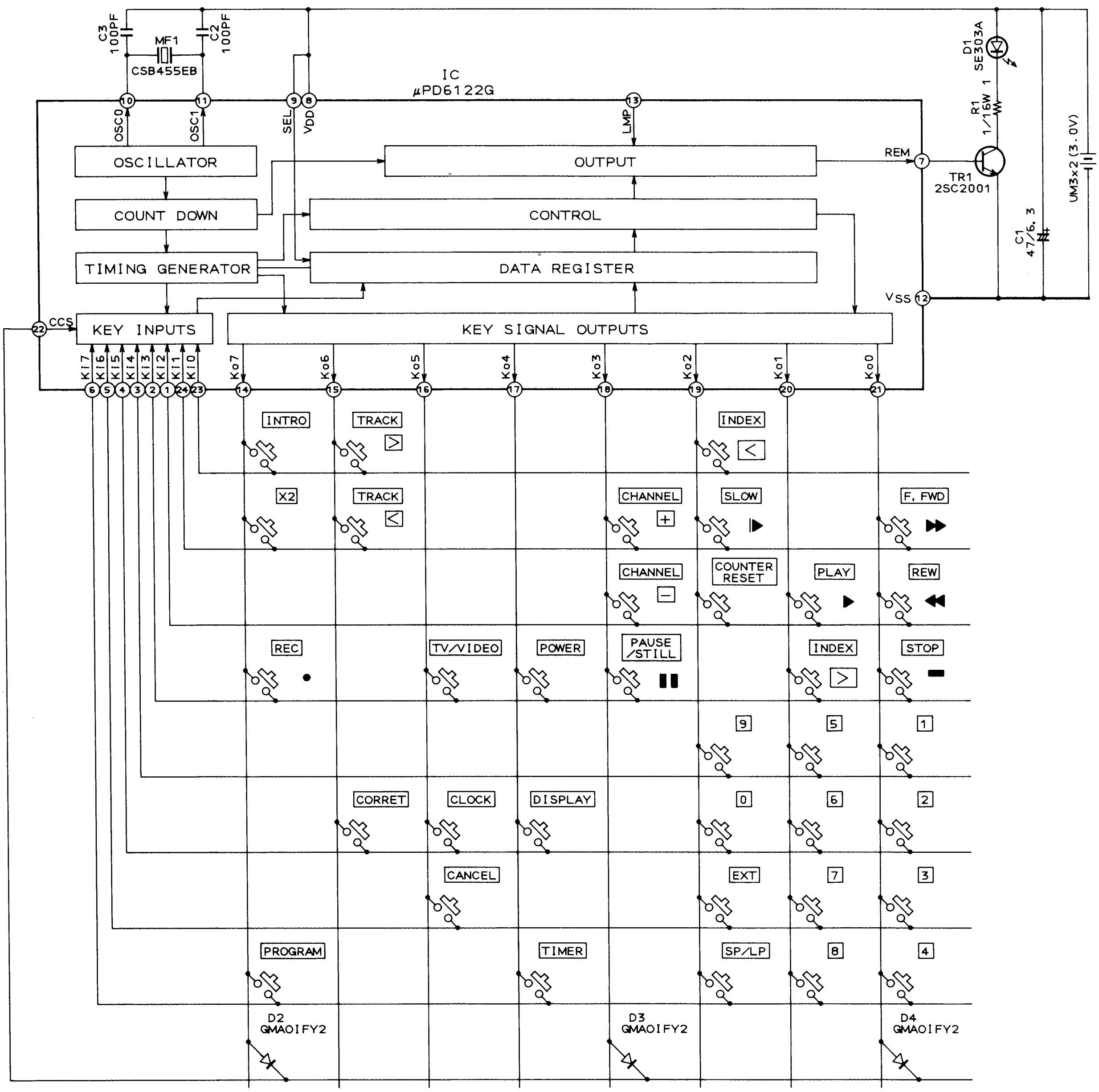
MOTOR PCB M3225D5010 (SM-250)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN µF 50WV (J)

VS-20EO
VS-26EA·ES·EV·EO
VS-27EV
MOTOR PCB (SM-250)
SCHEMATIC DIAGRAM
NO.7-6 V108426M

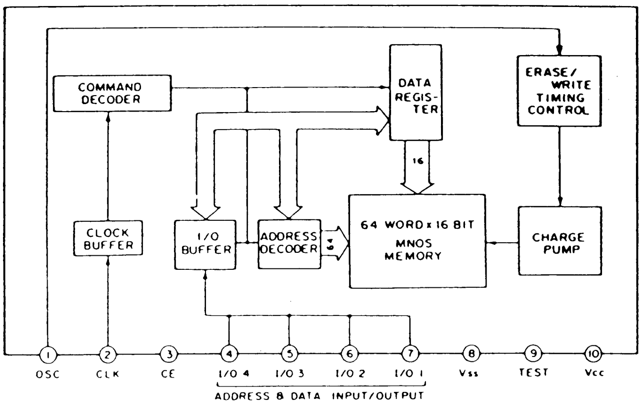

R2
R1
HD1
HD2
HD3
C1
C2
C3
IC2
NJM4558
R8
R9
R7
R6
R4
R5
R12
R13
C6
TR1
E C B
31
19
M51712FP
18
R3
C4
C5
C7
P102
1 2 3 4 5 6 7
M3225D5010
SM-250

MOTOR PCB M3225D5010(SM-250)

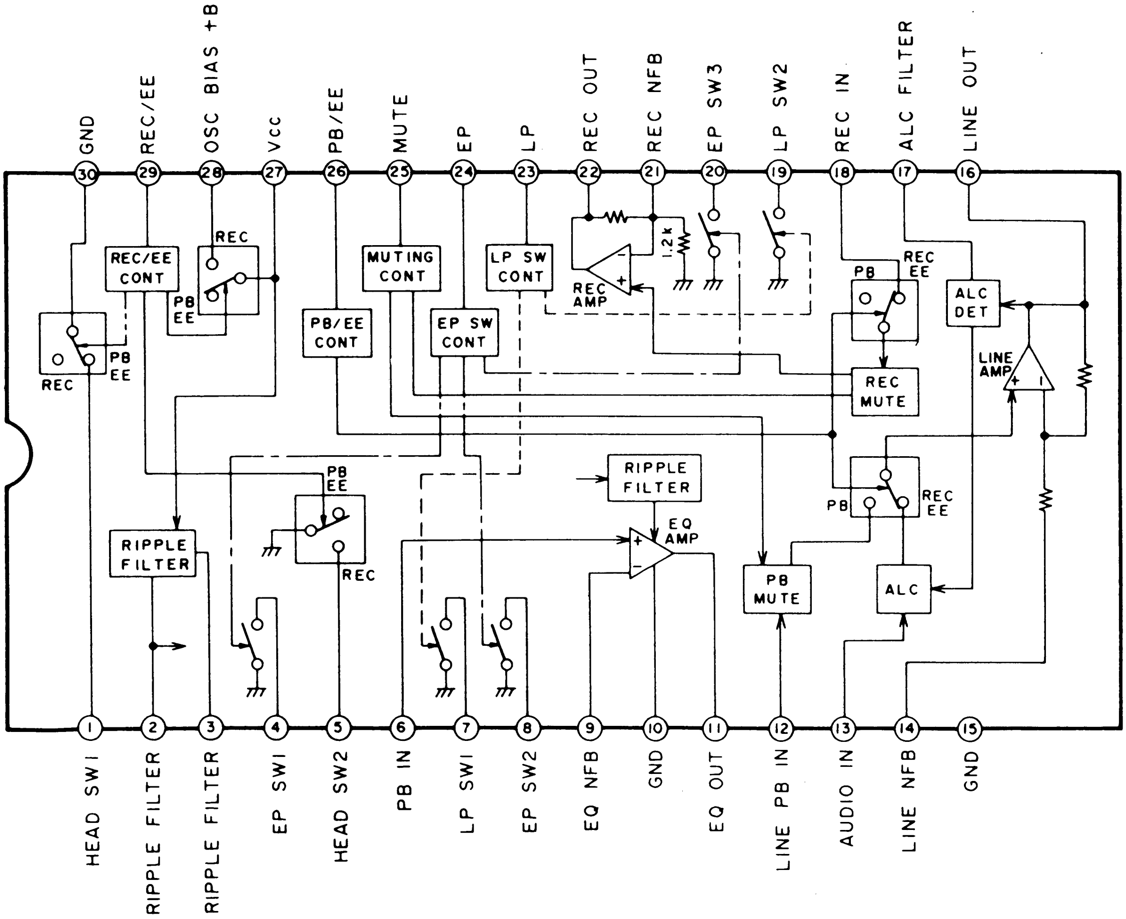

C3 100PF
MF1
CSB455EB
C2 100PF
IC
μPD6122G
OSC0
OSC1
SEL
VDD
LMP
OSCILLATOR
COUNT DOWN
TIMING GENERATOR
KEY INPUTS
OUTPUT
CONTROL
DATA REGISTER
KEY SIGNAL OUTPUTS
REM
Vss
CCS
KI7 KI6 KI5 KI4 KI3 KI2 KI1 KI0
Ko7 Ko6 Ko5 Ko4 Ko3 Ko2 Ko1 Ko0
D1 SE303A
R1 1/16W 1
TR1 2SC2001
C1 47/6.3
UM3x2 (3.0V)
INTRO
TRACK
INDEX
X2
TRACK
CHANNEL +
SLOW
F. FWD
CHANNEL −
COUNTER RESET
PLAY
REW
REC
TV/VIDEO
POWER
PAUSE /STILL
INDEX
STOP
9
5
1
CORRET
CLOCK
DISPLAY
0
6
2
CANCEL
EXT
7
3
PROGRAM
TIMER
SP/LP
8
4
D2 GMA01FY2
D3 GMA01FY2
D4 GMA01FY2

RC−V22A
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO.7−7 V108427M

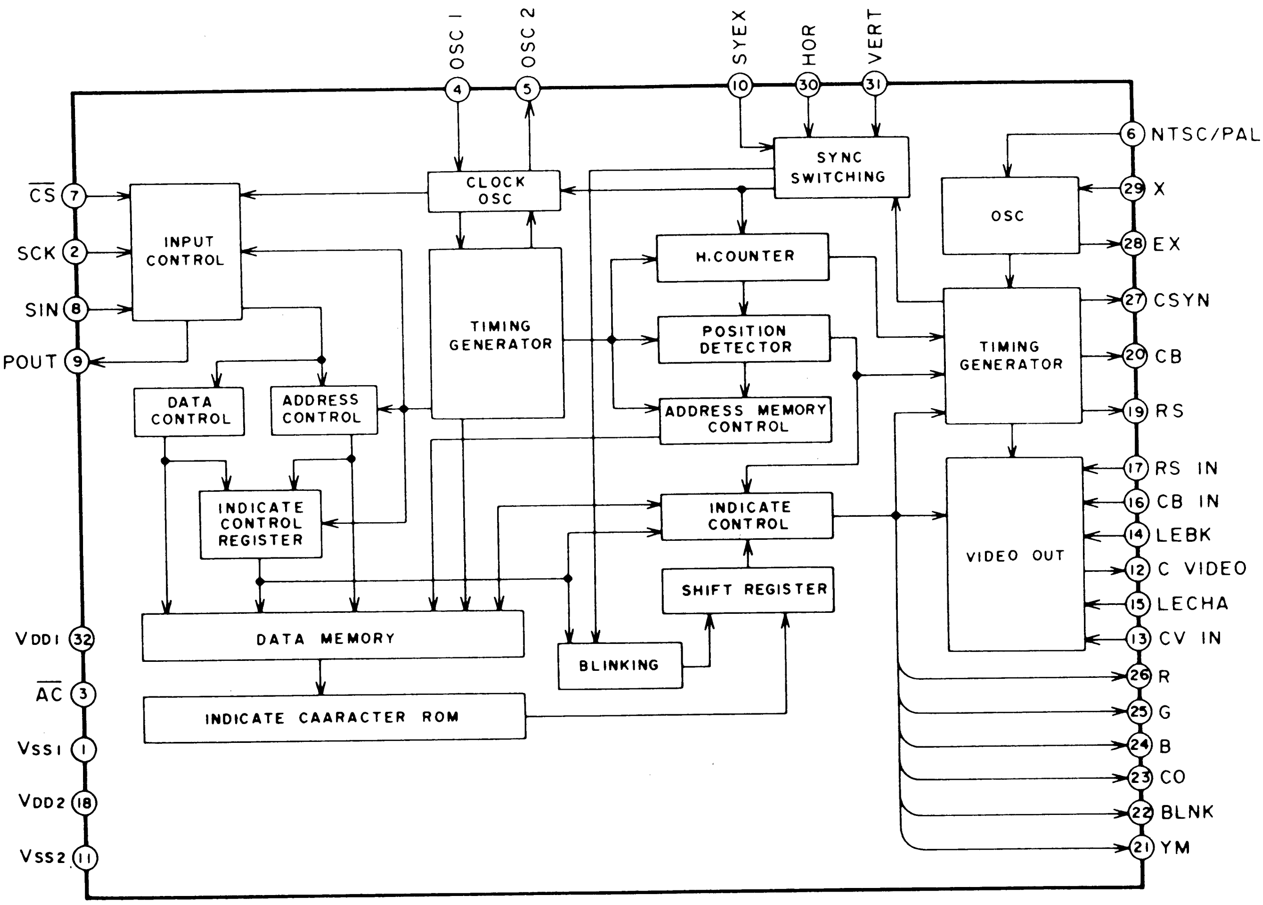
CXK1006 (NON VOLATILE RAM)


COMMAND DECODER
DATA REGISTER
ERASE/WRITE TIMING CONTROL
16
CLOCK BUFFER
I/O BUFFER
ADDRESS DECODER
64
64 WORD x 16 BIT MNOS MEMORY
CHARGE PUMP
1 2 3 4 5 6 7 8 9 10
OSC
CLK
CE
I/O 4
I/O 3
I/O 2
I/O 1
Vss
TEST
Vcc
ADDRESS & DATA INPUT/OUTPUT

LA7292 (AUDIO SIGNAL REC/P.B AMPLIFIER)

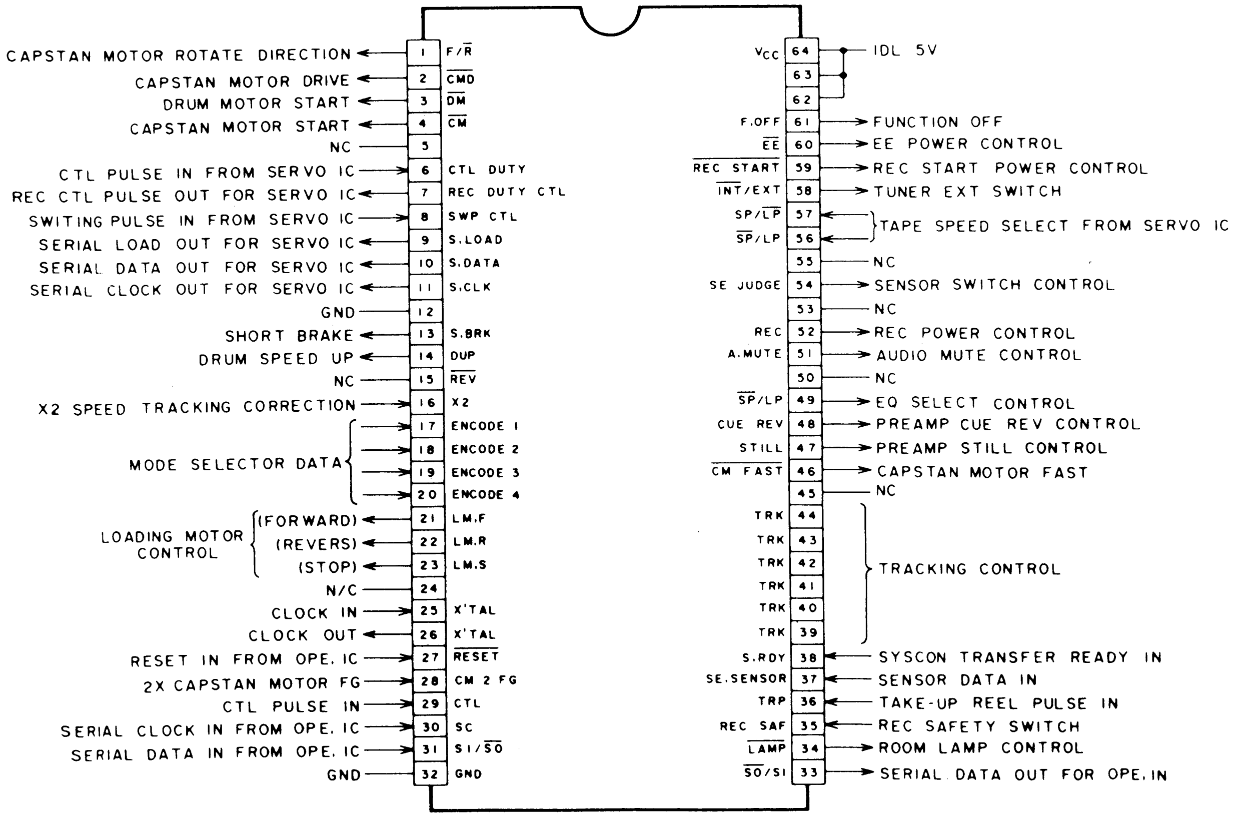

GND
REC/EE
OSC BIAS +B
Vcc
PB/EE
MUTE
EP
LP
REC OUT
REC NFB
EP SW3
LP SW2
REC IN
ALC FILTER
LINE OUT
30 29 28 27 26 25 24 23 22 21 20 19 18 17 16
REC/EE CONT
REC
PB EE
MUTING CONT
LP SW CONT
1.2k
REC AMP
PB
REC EE
ALC DET
REC
PB EE
PB/EE CONT
EP SW CONT
LINE AMP
REC MUTE
RIPPLE FILTER
PB EE
REC
RIPPLE FILTER
EQ AMP
PB
REC EE
PB MUTE
ALC
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
HEAD SW1
RIPPLE FILTER
RIPPLE FILTER
EP SW1
HEAD SW2
PB IN
LP SW1
EP SW2
EQ NFB
GND
EQ OUT
LINE PB IN
AUDIO IN
LINE NFB
GND

MB50455 (CHARACTER GENERATOR)



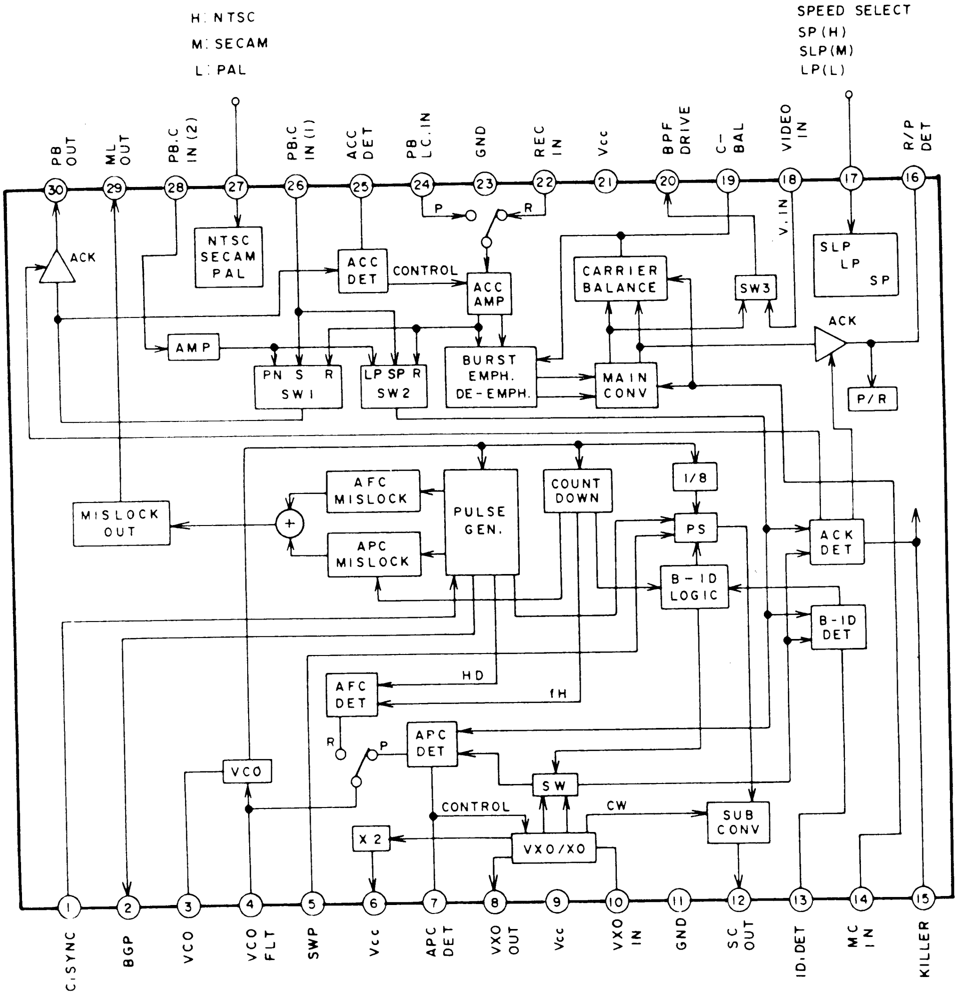
OSC 1 (4)
OSC 2 (5)
SYEX (10)
HOR (30)
VERT (31)
CS (7)
SCK (2)
SIN (8)
POUT (9)
VDD1 (32)
AC (3)
VSS1 (1)
VDD2 (18)
VSS2 (11)
CLOCK OSC
SYNC SWITCHING
INPUT CONTROL
TIMING GENERATOR
H.COUNTER
POSITION DETECTOR
ADDRESS MEMORY CONTROL
DATA CONTROL
ADDRESS CONTROL
INDICATE CONTROL REGISTER
INDICATE CONTROL
SHIFT REGISTER
DATA MEMORY
BLINKING
INDICATE CAARACTER ROM
OSC
TIMING GENERATOR
VIDEO OUT
(6) NTSC/PAL
(29) X
(28) EX
(27) CSYN
(20) CB
(19) RS
(17) RS IN
(16) CB IN
(14) LEBK
(12) C VIDEO
(15) LECHA
(13) CV IN
(26) R
(25) G
(24) B
(23) CO
(22) BLNK
(21) YM

MB88525-192 G (SYSTEM CONTROL)

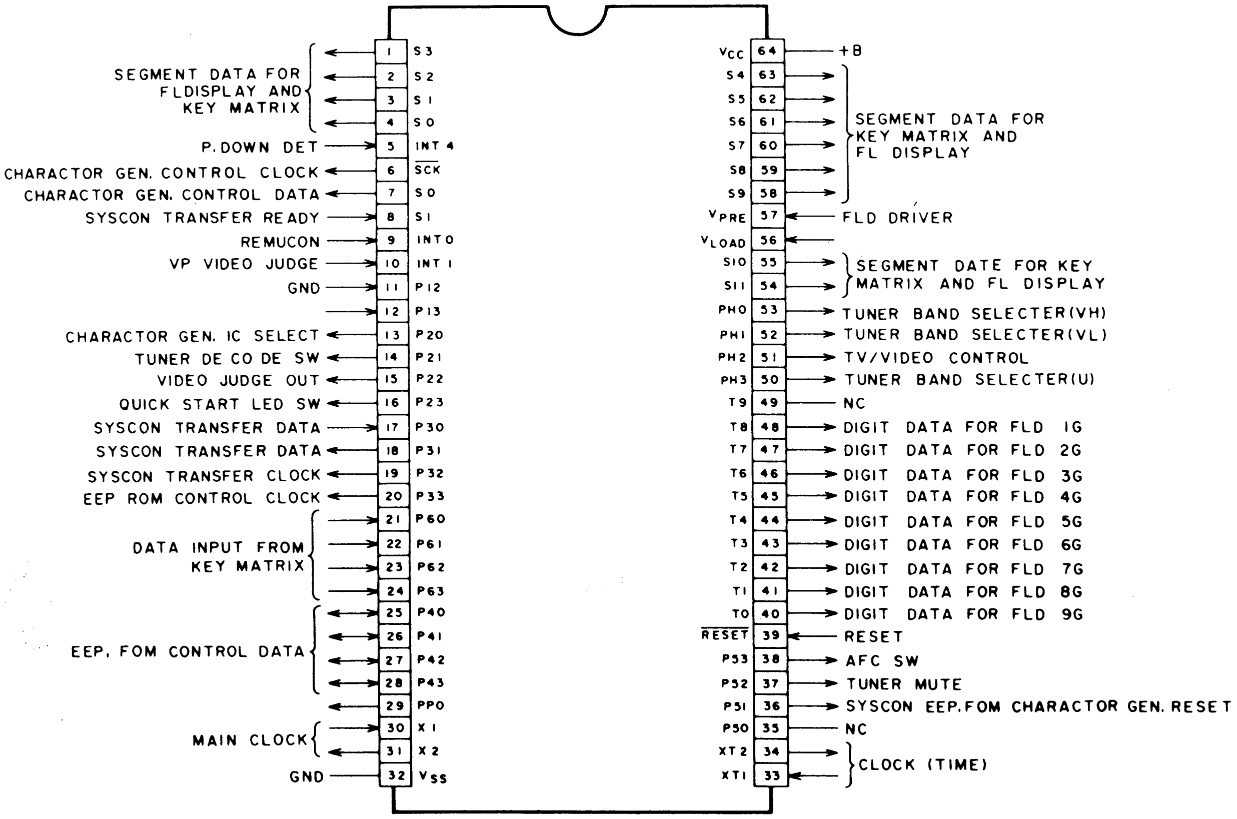


CAPSTAN MOTOR ROTATE DIRECTION — 1 F/R
CAPSTAN MOTOR DRIVE — 2 CMD
DRUM MOTOR START — 3 DM
CAPSTAN MOTOR START — 4 CM
NC — 5
CTL PULSE IN FROM SERVO IC — 6 CTL DUTY
REC CTL PULSE OUT FOR SERVO IC — 7 REC DUTY CTL
SWITING PULSE IN FROM SERVO IC — 8 SWP CTL
SERIAL LOAD OUT FOR SERVO IC — 9 S.LOAD
SERIAL DATA OUT FOR SERVO IC — 10 S.DATA
SERIAL CLOCK OUT FOR SERVO IC — 11 S.CLK
GND — 12
SHORT BRAKE — 13 S.BRK
DRUM SPEED UP — 14 DUP
NC — 15 REV
X2 SPEED TRACKING CORRECTION — 16 X2
MODE SELECTOR DATA — 17 ENCODE 1, 18 ENCODE 2, 19 ENCODE 3, 20 ENCODE 4
LOADING MOTOR CONTROL (FORWARD) — 21 LM.F
(REVERS) — 22 LM.R
(STOP) — 23 LM.S
N/C — 24
CLOCK IN — 25 X'TAL
CLOCK OUT — 26 X'TAL
RESET IN FROM OPE. IC — 27 RESET
2X CAPSTAN MOTOR FG — 28 CM 2 FG
CTL PULSE IN — 29 CTL
SERIAL CLOCK IN FROM OPE. IC — 30 SC
SERIAL DATA IN FROM OPE. IC — 31 SI/SO
GND — 32 GND
VCC 64, 63, 62 — IDL 5V
F.OFF 61 — FUNCTION OFF
EE 60 — EE POWER CONTROL
REC START 59 — REC START POWER CONTROL
INT/EXT 58 — TUNER EXT SWITCH
SP/LP 57, SP/LP 56 — TAPE SPEED SELECT FROM SERVO IC
55 — NC
SE JUDGE 54 — SENSOR SWITCH CONTROL
53 — NC
REC 52 — REC POWER CONTROL
A.MUTE 51 — AUDIO MUTE CONTROL
50 — NC
SP/LP 49 — EQ SELECT CONTROL
CUE REV 48 — PREAMP CUE REV CONTROL
STILL 47 — PREAMP STILL CONTROL
CM FAST 46 — CAPSTAN MOTOR FAST
45 — NC
TRK 44, TRK 43, TRK 42, TRK 41, TRK 40, TRK 39 — TRACKING CONTROL
S.RDY 38 — SYSCON TRANSFER READY IN
SE.SENSOR 37 — SENSOR DATA IN
TRP 36 — TAKE-UP REEL PULSE IN
REC SAF 35 — REC SAFETY SWITCH
LAMP 34 — ROOM LAMP CONTROL
SO/SI 33 — SERIAL DATA OUT FOR OPE. IN

TA8632 (VIDEO CHROMA SIGNAL PROCESSOR)


H: NTSC
M: SECAM
L: PAL
SPEED SELECT
SP(H)
SLP(M)
LP(L)
PB OUT
ML OUT
PB.C IN(2)
PB.C IN(1)
ACC DET
PB LC.IN
GND
REC IN
Vcc
BPF DRIVE
C-BAL
VIDEO IN
R/P DET
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
ACK
NTSC SECAM PAL
ACC DET
CONTROL
P
R
ACC AMP
CARRIER BALANCE
SW3
V.IN
SLP LP SP
ACK
AMP
PN S R SW1
LP SP R SW2
BURST EMPH. DE-EMPH.
MAIN CONV
P/R
AFC MISLOCK
PULSE GEN.
COUNT DOWN
1/8
PS
ACK DET
MISLOCK OUT
+
APC MISLOCK
B-ID LOGIC
B-ID DET
AFC DET
HD
fH
R
P
APC DET
VCO
SW
CONTROL
CW
SUB CONV
X2
VXO/XO
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
C.SYNC
BGP
VCO
VCO FLT
SWP
Vcc
APC DET
VXO OUT
Vcc
VXO IN
GND
SC OUT
ID.DET
MC IN
KILLER

μPD75208CW (OPERATION)


SEGMENT DATA FOR FLDISPLAY AND KEY MATRIX
1 S3
2 S2
3 S1
4 S0
P.DOWN DET 5 INT 4
CHARACTOR GEN. CONTROL CLOCK 6 SCK
CHARACTOR GEN. CONTROL DATA 7 SO
SYSCON TRANSFER READY 8 SI
REMUCON 9 INT0
VP VIDEO JUDGE 10 INT 1
GND 11 P12
12 P13
CHARACTOR GEN. IC SELECT 13 P20
TUNER DE CO DE SW 14 P21
VIDEO JUDGE OUT 15 P22
QUICK START LED SW 16 P23
SYSCON TRANSFER DATA 17 P30
SYSCON TRANSFER DATA 18 P31
SYSCON TRANSFER CLOCK 19 P32
EEP ROM CONTROL CLOCK 20 P33
DATA INPUT FROM KEY MATRIX
21 P60
22 P61
23 P62
24 P63
EEP. FOM CONTROL DATA
25 P40
26 P41
27 P42
28 P43
29 PP0
MAIN CLOCK
30 X1
31 X2
GND 32 VSS
VCC 64 +B
S4 63
S5 62
S6 61
S7 60
S8 59
S9 58
SEGMENT DATA FOR KEY MATRIX AND FL DISPLAY
VPRE 57 FLD DRIVER
VLOAD 56
SI0 55
SI1 54
SEGMENT DATE FOR KEY MATRIX AND FL DISPLAY
PH0 53 TUNER BAND SELECTER(VH)
PH1 52 TUNER BAND SELECTER(VL)
PH2 51 TV/VIDEO CONTROL
PH3 50 TUNER BAND SELECTER(U)
T9 49 NC
T8 48 DIGIT DATA FOR FLD 1G
T7 47 DIGIT DATA FOR FLD 2G
T6 46 DIGIT DATA FOR FLD 3G
T5 45 DIGIT DATA FOR FLD 4G
T4 44 DIGIT DATA FOR FLD 5G
T3 43 DIGIT DATA FOR FLD 6G
T2 42 DIGIT DATA FOR FLD 7G
T1 41 DIGIT DATA FOR FLD 8G
T0 40 DIGIT DATA FOR FLD 9G
RESET 39 RESET
P53 38 AFC SW
P52 37 TUNER MUTE
P51 36 SYSCON EEP.FOM CHARACTOR GEN. RESET
P50 35 NC
XT2 34
XT1 33
CLOCK (TIME)